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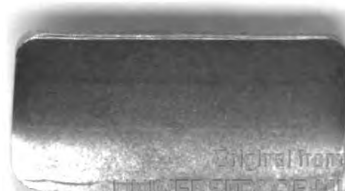


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THE AMERICAN NUMISMATIC SOCIETY

MUSEUM NOTES

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FROM WAPPENMÜNZEN TO GORGONEIA TO OWLS

(PLATES 1-2)

JOHN H. KROLL

Since Kraay's classic 1956 paper,¹ most scholarship on the archaic coinage of Athens has continued to focus on the chronology and historical implications of the early owl series. In comparison, Athens' earlier and more problematic wappenmünzen coinage has attracted surprisingly little detailed discussion. Hopper published an invaluable reexamination of the die record, which inter alia showed that, contrary to Seltman's implausibly complex organization, the wappenmünzen issues must have followed one another in a normal linear sequence.² But despite such progress, the wappenmünzen have remained one of the most elusive of Greek coinages because of their enigmatic variety of changing types. In this article I argue that the significance of these changing types is readily understood through comparison with certain other Greek coinages, that the late wappenmünzen with gorgoneion obverses represent a special transitional stage in the evolution to the owl coinage, and that the resulting conclusions have important implications for the chronology of sixth-century Athenian coinage as a whole.

¹ C. M. Kraay, "The Archaic Owls of Athens: Classification and Chronology," *NC* 1956, pp. 43-68; cited hereafter as "Owls." For an excellent, recent summary of early Athenian coinage, C. M. Kraay, *Archaic and Classical Greek Coins* (Berkeley and Los Angeles, 1976), pp. 56-63; cited hereafter as *ACGC*.

² R. J. Hopper, "Observations on the Wappenmünzen," *Essays Robinson*, pp. 16-39; cited hereafter as Hopper.

1. THE NUMISMATIC CONTEXT OF THE WAPPENMÜNZEN

Over the years, Seltman's hypothesis that the wappenmünzen types reproduce the coats-of-arms of the leading families of sixth-century Athens³ has lost all credibility. Van Buchem, Lacroix, and Hopper have demonstrated that the very existence of hereditary family badges in ancient Greece is a dubious proposition at best and that Seltman's identification of particular coin devices with particular families was based on some highly arbitrary manipulation of evidence.⁴ To this we may add the negative implications of revised chronology: so long as the wappenmünzen could be considered a pre-Peisistratid coinage, one might, with Seltman, envisage a succession of powerful families periodically gaining control of the state and mint, each family in turn having the coinage stamped with its hypothetical emblem. But now that it is recognized that the succeeding owl silver began during the last quarter of the sixth century, the wappenmünzen, which involved only 14 different didrachm types or issues (Plates 1 and 2), could hardly have commenced before the middle part of the century. Whether instituted around the time of Peisistratus' first tyranny, ca. 560, or, as is historically more probable, after the final consolidation of his power in 546, the wappenmünzen should fall during the time of Peisistratid rule,⁵ when competition between blocs of aristocratic families had been eliminated as a factor in Athenian politics. In all fairness to Seltman, however, his full argument proposed that the types were placed on the wappenmünzen by mint magistrates and that the types served in effect as the moneyers' private badges.⁶ Apart from his chronology, it is only Seltman's assumption that the moneyers used family heraldry that has been seriously and justifiably questioned.

³ C. T. Seltman, *Athens, Its History and Coinage before the Persian Invasion* (Cambridge, 1924), pp. xviii-xix, 19-38; cited hereafter as Seltman.

⁴ H. J. H. van Buchem, "Family Coats-of-Arms in Greece?" *CR* 40 (1926), pp. 181-83; L. Lacroix, "Les 'blasons' des villes grecques," *Études d'archéologie classique* 1 (Paris, 1955-56), pp. 91-115; R. J. Hopper, "A Note on Aristophanes, *Lysistrata* 665-70," *ClassQ* 10 (1960), pp. 242-47.

⁵ On this chronology in general, *ACGC*, pp. 58-60; in more detail, below, pp. 7-10.

⁶ Seltman, pp. 23-24, 38, n. 1.

In a recent paragraph, Kraay has raised again the possibility that the types were moneyers' symbols, although he mentions this as only one of three possible interpretations.

Types may have been officially current for short periods only, as in the Middle Ages, thus compelling holders of currency to pay a premium to have their silver restamped at intervals; this might explain why some *Wappenmünzen* issues survive in so few specimens. . . . An association of changing types with successive Panathenaic festivals has also been suggested, for most of the types refer to the cult of Athena or to Panathenaic contests. Finally, the 'heraldic theory' can perhaps be salvaged in part: a fragment of an archon list from the reign of Hippias proves that some noble families acquiesced in Pisistratid rule to the extent of accepting public office; it would not be unlike Pisistratus to invite rich men to shoulder part of the cost of issues of coinage from time to time, and to require them to stamp such coins with some distinctive device as a mark of their responsibility for good weight and quality.⁷

Kraay declines to decide between the three suggestions on the grounds that "there is no decisive evidence for one over the other." But this judgement, I believe, is unduly pessimistic. Far from being unique to the *wappenmünzen*, changing obverse types were characteristic of a number of other Greek coinages, and there is evidence from some of these coinages that the changing types were indeed the personally chosen devices of mint magistrates. These other coinages surely provide the essential typological context for interpreting the parallel occurrence of changing types at Athens.

The most conspicuous non-Athenian coinages with changing obverses are four classical electrum and gold coinages of East Greece: the late sixth-, fifth-, and fourth-century electrum coins of Cyzicus, whose

⁷ *ACGC*, pp. 59–60. On the "festival" theory, see "Owls," p. 65, n. 1; Hopper, p. 26; N. Yalouris, "Athena als Herrin der Pferde," *Museum Helveticum* 7 (1950), pp. 52–55; H. A. Cahn, "Dating the Early Coinage of Athens," *Kleine Schriften zur Münzkunde und Archäologie* (Basel, 1975), p. 85. In none of these works, however, is the theory defended in detail.

approximately 200 different obverses are coupled with typeless square punch reverses;⁸ the fifth- and fourth-century electrum coins of Phocaea and Mytilene, the former also with typeless punch reverses,⁹ the latter with changing obverses *and* reverses;¹⁰ and the fourth-century gold staters of Lampsacus, whose reverses are struck with a static civic type, a protome of Pegasus.¹¹ As one might expect, this East Greek tradition of changing obverses can be traced well back to the early Ionian electrum of the late seventh and early sixth centuries and in large part should account for the great variety of types in this earliest phase of Greek coinage.

The best documented instance is at Samos, where, after an initial phase of typeless "pre-coins," the electrum planchets were stamped with a succession of five known obverse devices: ram, flying bird, swan, facing lion's head, and swastika or tetraskeles.¹² Weidauer's recent monograph on early electrum issues demonstrates that a fair number of other Ionian coins with unrelated obverse types are likewise to be assigned to a limited number of mints through reverse die links or distinctive forms of reverse punches.¹³ For example, at one mint (probably Miletus) the obverse type of a butting bull is linked through common reverse punches to the obverse of a reclining horse.¹⁴ From another, a boar's head obverse

⁸ H. von Fritze, "Die Elektronprägung von Kyzikos," *Nomisma* 7 (1912), pp. 1–38; see also *ACGC*, pp. 260–65, pl. 56, 953–67.

⁹ F. Bodenstedt, *Phokäisches Elektron-Geld von 600–326 v. Chr.* (Mainz, 1976), pls. 11–12; see also *ACGC*, pp. 265–66, pl. 56, 969–73.

¹⁰ F. Bodenstedt (above, n. 9), pls. 12–14; see also *ACGC*, p. 266, pl. 56, 974–81.

¹¹ A. Baldwin, "Lampsakos: The Gold Staters, Silver and Bronze Coinages," *AJN* 53 (1924), pp. 9–52, pls. 1–3; see also *ACGC*, pp. 251, 259–60; pl. 54, 918–24.

¹² J. P. Barron, *The Silver Coins of Samos* (London, 1966), pp. 15–16, pl. 30, 1–9; see also *ACGC*, p. 26, pl. 3, 66–67. Changing types are characteristic also of the later (ca. 525 B.C.) electrum-plated lead coinage of Samos, from which four different devices are extant. See Barron, p. 17, pl. 30, 10–12, with *ANS Annual Report* (1979), p. 13, fig. 5; see also *ACGC*, pp. 29–30, pl. 3, 68–69, and E. S. G. Robinson, "Some Electrum and Gold Greek Coins," *ANSCent*, pp. 591–94.

¹³ L. Weidauer, *Probleme der frühen Elektronprägung* (Fribourg, 1975), pp. 65–71; cited hereafter as Weidauer.

¹⁴ Weidauer, pp. 30–31, 67, pl. 14–15, nos. 131–32 with 135. From other technical considerations Weidauer groups these with staters and fractions bearing the type of a recumbant lion, nos. 126–30; see also *ACGC*, p. 25.

(with an imperfectly preserved inscription) is similarly linked to an obverse displaying the forepart of a lion.¹⁵ And from a third mint, which can hardly be other than Ephesus, the well-known stater with the type of a grazing stag and the inscription, "I am the badge of Phanes," shares the scrambled, linear character of its reverse punches with pieces whose obverse types are respectively a bee, the forepart of a stag, and a double or single gorgoneion.¹⁶ Admittedly, in this last grouping there is no bona fide die linkage; but pending any evidence to the contrary, the association lends strong new support to the assumptions that the Phanes stater and its third, which is inscribed simply with Phanes' name in the genitive, belonged to a series of civic issues and that Phanes himself was a public minting official who signed his issue with his stag badge and name in order to fix his responsibility for the coins' correct weight and alloy.¹⁷

That minting officials were receiving conspicuous recognition on coinage already in this early period is independently implied by two other early electrum issues signed with inscriptions: the pre-Croesus Lydian issues that bear the name *Valvel* or *Ἰκάλι*.¹⁸ Both issues bear the same lion's head device of the Lydian monarchy. But since neither of the inscriptions record the name of a Lydian king, it is hard to imagine what the inscriptions could be unless they are signatures of royal officials charged with the coins' production.¹⁹

The same sort of reasoning applies to the changing types of the early civic electrum coins of Samos and other Ionian states. Because of their variety and number, the types for the most part cannot be identified as state badges and thus in all probability are the pictorial signatures of moneyers—like Phanes—responsible for separate issues. Kraay has

¹⁵ Weidauer, pp. 21, 66, pl. 7, nos. 56 with 57–58.

¹⁶ Weidauer, pp. 18–20, 68–69, pls. 4–6, nos. 33–46; see also *ACGC*, pl. 3, 53–54, 59.

¹⁷ So Weidauer, p. 62, and Robinson (above, n. 12), pp. 586–88. Weidauer's attribution of the Phanes and other coins to the single civic mint of Ephesus effectively undermines the alternative views that Phanes was a private banker or merchant (so most recently, J. Boardman, *The Greeks Overseas*, 3rd ed. [London, 1980], p. 101) or a dynast or tyrant of Halicarnassus (P. Gardner, "Numismatic Reattributions," *NC* 1878, pp. 262–65; *ACGC*, p. 23) who issued coins in his own name.

¹⁸ Weidauer, pp. 25–28, pls. 11–12, nos. 91–115, see also *ACGC*, p. 24, pl. 3, 62–63.

¹⁹ So, tentatively, Weidauer, pp. 59–62, and *ACGC*, pp. 24–25.

established that such early coinages were struck for use within the borders of the issuing states,²⁰ which made the addition of a fixed state emblem (or inscribed ethnic) superfluous. On the other hand, the very nature of electrum coinage made accountability of minting magistrates a particularly crucial consideration. Whether these early mints employed a natural or an artificially controlled alloy of gold and silver, the temptation must always have been great for officials to debase the alloy with added silver. It is not surprising therefore that the tradition of changing issue types seems to have begun with the emergence of electrum coinage itself. Nor is it surprising that the tradition lived on as long as Cyzicus, Phocaea, and Mytilene continued to strike electrum in the classical period.²¹

Moneyers' signatures, whether pictorial or inscribed, remained of course a prominent feature of perhaps the majority of Greek coinages down into Roman times, although as coins came to bear static civic (or regal) types the issue signatures were customarily reduced to subsidiary symbols and/or inscribed names or monograms. Three notable exceptions are the aforementioned gold staters of Lampsacus that coupled changing obverse types with a static national reverse type (above, n. 11); the fifth-century tetradrachms of Melos, which bear the national symbol of an apple on the obverse but changing types on the reverse;²² and the fifth- and fourth-century silver of Abdera, also with a civic obverse, a griffin,

²⁰ C. M. Kraay, "Hoards, Small Change and the Origin of Currency," *JHS* 84 (1964), pp. 76–85, 88–89.

²¹ It would probably be mistaken to insist that the changing types of these East Greek electrum coinages were in all cases "personal" in the strict sense that each device must have been chosen by a single official to represent himself. For all we know, some of these coinages may have been controlled by a board of officials who collectively selected their issue type without reference to an individual member; or types in some cases may have been voted by some higher body in the city government. Such instances, however, would be variants of administrative procedure rather than of type function, which in any case was to identify minting responsibility by distinguishing issues.

²² C. M. Kraay, "The Melos Hoard of 1907 Re-examined," *NC* 1964, pp. 1–20, pls. 1–3; esp. p. 18: "These varying reverses are much more plausibly explained as the distinctive marks of individuals responsible for different batches of coinage." See also *ACGC*, p. 48, pl. 7, 129–36.

but with changing magistrates' names and type-symbols on reverses.²³ In view of the relationship between the magistrates' names and the changing pictorial reverse types, this last coinage is of particular importance for illustrating the principle that changing types are to be recognized as moneyers' symbols writ large. Mention finally should be made of the changing obverse *and* reverse types of denarii of the late Roman Republic. Since these types too are accompanied by the names of the moneyers and since the types usually refer to the moneyers' family history or political connections, there is again no doubt that the types were personal rather than national in character.²⁴

It should be no different in sixth-century Athens. If the wappenmünzen are at all to be understood within the context of established Greek minting practice, their types must be recognized as the signatures of individuals entrusted with the minting of the successive issues. Athens had always maintained close ties with East Greece, but at no time prior to the Ionian revolt of the 490s were these ties stronger than during the Peisistratid era. Peisistratus's active friendship with the tyrants of Naxos and Samos, his ritual cleansing of Delos, and his adventurism in the Hellespont all point to a strong eastern orientation in his foreign policy; and under the cultural patronage of the Peisistratids an unprecedented wave of Ionian influence all but transformed Athenian architecture and sculpture.²⁵ The wappenmünzen began early in this era. Since their changing types represent a borrowing of a well-estab-

²³ J. M. F. May, *The Coinage of Abdera* (London, 1966); see also *ACGC*, pp. 153–56, pl. 30, 531–40.

²⁴ Crawford, pp. 725–42.

²⁵ Foreign Policy: A. Andrewes, *The Greek Tyrants* (London, 1956), p. 112. Architecture and Sculpture: W. B. Dinsmoor, *The Architecture of Ancient Greece* (London, 1950), pp. 90, 143; M. Robertson, *A History of Greek Art* (Cambridge, 1975), pp. 78–79; B. S. Ridgway, *The Archaic Style in Greek Sculpture* (Princeton, 1977), pp. 104–6, 197–201; J. G. Pedley, "Cycladic Influence in the Sixth Century Sculpture of Attica," in *Athens Comes of Age*, Papers of a Symposium Sponsored by the Archaeological Institute of America, Princeton Society, and the Department of Art and Archaeology, Princeton University (Princeton, 1978), pp. 53–63; T. L. Shear, Jr., "Tyrants and Buildings in Archaic Athens," *Athens Comes of Age*, p. 10. It was during this period too that the Athenian aristocracy adopted not only the rich Ionian fashion in dress but other cultural aspects of leisured East Greek society; see H. A. Shapiro, "Courtship Scenes in Attic Vase-Painting," *AJA* 85 (1981), pp. 138–141, esp. n. 39.

lished Ionian monetary convention, the character of this earliest Athenian coinage should be regarded as one further manifestation of the impact of East Greece on Peisistratid Athens.²⁶

On a number of Hellenistic civic coinages, moneyers' names were recorded in recognition of the public service, if not actual personal expense, rendered by the wealthy citizens who undertook the mint administration as a public benefaction.²⁷ While it may be anachronistic to apply the notion of a developed minting liturgy with its elements of civic obligation and financial outlay to archaic Athens, the pseudo-Aristotelian *Economics* (2.2.4) does mention liturgies at Athens for

²⁶ Nor was this the only East Greek influence on archaic Athenian coinage. Athens, perhaps alone of mainland Greek states, struck at least one issue of electrum, four specimens of which have been found in Athens. These hectae have an owl l. on the obverse and a reverse incuse square that has every appearance of containing either the letter delta or alpha or a ligature involving one of these letters; Seltman, pp. 80–81, 193, pl. 14, 306–7; J. N. Svoronos, *Les monnaies d'Athènes* (Munich, 1923–26), pl. 1, 1–5. J. P. Six, "Monnaies grecques inédites et incertaines," *NC* 1895, pp. 179–80, read delta for Delos and connected the coins with Peisistratus' cleansing of Delos. Seltman, p. 81, read delta for Delphi and associated the coins with the Alcmaeonid exiles there shortly before 510. But if the coins were struck at Athens, the letter or ligature—unless it is a magistrate's initial—should probably be recognized as alpha or alpha-tau for Athens or Attica. The design on one of the two reverse dies is similar to the ligature inscribed on spear butts from the archaic Acropolis (A. Johnston, "Some Inscribed Sauroterres from the Acropolis," *ArchAnAth* 9 [1976], pp. 87–89; with M. Lang, *Graffiti and Dipinti, the Athenian Agora* 21 [Princeton, 1976], pp. 51–52) or on some Hellenistic Athenian shields (J. H. Kroll, "Some Athenian Armor Tokens," *Hesperia* 46 [1977], p. 142), but the interpretation of these ligatures on the armor is problematic. The style and leftward orientation of the electrum owls (two obverse dies) relates them to the owls on wappenmünzen didrachms (Plate 1, 12). For electrum pieces of similar Euboeic weight possibly related to Athenian wappenmünzen but with plain punch reverses, see Seltman, p. 193, pl. 14, nos. 308 (strutted wheel obverse = *Traité* 1, nos. 220–21) and 310 (facing bull's head obverse = *Traité* 1, nos. 230–31). Since one of the bull's head coins is said to have been found in Athens and another in Euboea, and since strutted wheel, owl l., and bull's head all seem to be among the later wappenmünzen devices (below, n. 46), it is tempting to attribute all of these electrum coins to Athens and to date them during the last decade of the wappenmünzen silver.

²⁷ Now see N. F. Jones, "The Autonomous Wreathed Tetradrachms of Magnesia on Maeander," *ANSMN* 24 (1979), pp. 81–90; with M. Thompson, *The New Style Silver Coinage of Athens* (New York, 1961), pp. 93–99.

maintaining warships, training choruses, and other unspecified services during the tyranny of Hippias.²⁸ And, as Kraay aptly observed with reference to the known archons during the early years of Hippias' rule,²⁹ the Peisistratids obtained the support of potentially hostile aristocrats by appointing them—along with the tyrants' own friends and relations—to honorific posts in the city administration. No higher personal distinction could have been extended to overseers of the mint than to allow them to strike coins with devices of their own choosing. At the same time these moneyers' types served, as always, the more fundamental and practical purpose of ensuring against adulteration and sub-standard weight by identifying the official responsible for each coin struck.

Not knowing the names of the wappenmünzen magistrates, we can only speculate on the possible motives that governed the selection of their various devices. To judge from occasional punning magistrate symbols on Abderite and New Style Athenian silver,³⁰ some of the wappenmünzen types conceivably contain canting allusions to personal names, certain of the horse types (Plate 1, 3, 7–9), for instance, representing magistrates whose names began in "Hipp-." (One immediately thinks of Peisistratus' sons Hipparchus and Hippias, one or both of whom might very well have served as moneyers under their father, if not after his death.) On the other hand, unless the owl type (Plate 1, 12) represents a name like Glaukon or a theophoric name referring to Athena like Athenodorus, the type would seem to be essentially public in nature, although employed, like Phanes' Ephesian stag, as a magistrate's privately chosen issue symbol.

Seltman made much of the fact that each of the wappenmünzen types occurs at least once as a shield blazon in scenes painted on Attic pottery. With well over a hundred different Athenian shield devices on record, the coincidence is perhaps not so remarkable. But one has to confess in any case that a moneyer needing an emblem for his issue might very well

²⁸ See B. A. van Groningen, *Aristotle, le second livre de l'economique* (Leiden, 1933), pp. 72–75.

²⁹ Above, p. 3. On the political implications of the archon list to which Kraay refers, Andrewes (above, n. 25), p. 109–11.

³⁰ *ACGC*, p. 155; Thompson (above, n. 27), p. 603.

have turned to his private military blazon. It may be more significant, however, that all of the wappenmünzen types except horse's hindquarters are also paralleled on other Greek coinages with changing types or symbols. Frontal lion's head, tetraskeles (though not triskeles), forepart of horse, bull (if not bull's head facing), and beetle served as types on early Samian and unattributed Ionian electrum coins.³¹ The changing reverse types of fifth-century Melian tetradrachms include a four-spoked wheel, a cross-bar wheel, and the triskeles.³² Wheel, amphora, owl, astragal, and lion's head frontal occur as magistrates' symbols on fifth-century Samian silver; beetle, amphora, owl, horse, and astragal as magistrates' symbols on Abderite silver of the fifth and early fourth centuries.³³ Such iconographical parallels imply that the motives responsible for the wappenmünzen types were probably the same as the motives that underlie private magistrates' badges on the coinages of other Greek states. In general terms, we may identify such devices as private by their changing behavior and the predominately "unofficial" character of their iconography. But beyond this it is rarely possible to go. Even at Abdera, where changing types and symbols are accompanied by the names of the magistrates who apparently selected them, the personal or other associations of the vast majority of the devices remain obscure. Thus we may conjecture, but we cannot expect to know, why particular Athenians earlier chose to be represented by specific wappenmünzen types.

2. THE GORGONEION ISSUES

One of the wappenmünzen devices stands apart and must be exempted from the foregoing discussion. This is the gorgoneion, which was introduced with the tetradrachm denomination towards the end of the

³¹ Above, n. 12; Weidauer, nos. 131–32, 138–46, 154–65, 199–203; *Traité* 1, no. 222, with D. G. Hogarth, *Excavations of Ephesus* (London, 1908), p. 87, nos. 81–83 (beetle). Electrum coins with wheel and bull's head facing obverses may or may not be Athenian (above, n. 26).

³² Kraay, "Melos" (above, n. 22), nos. 13–16, 29, 35, 36, 45.

³³ Barron (above, n. 12), pp. 183–85, nos. 25–27, 38–39, 40–43, 44; p. 190, no. 80. May (above, n. 23), nos. 126–29, 164–70, 175–76, 186, 423–38.

wappenmünzen series.³⁴ Primarily from its behavior, Seltman recognized that the gorgoneion obverse of the wappenmünzen tetradrachms (Plate 2, 16–17) is not to be regarded as a private symbol.³⁵ Its position as the obverse type on a bifacial coinage and its retention through two issues, distinguished by the respective reverse types of a bull's head facing and the head and paws of a frontal lion, show it rather to be the first public or national coin type of Athens. As the centerpiece of Athena's aegis, the gorgoneion was, like her owls, one of the most appropriate symbols of her city. In this connection the gorgoneion was later employed as a symbol of Athenian citizenship on fourth-century Athenian bronze allotment plates alongside other validating stamps with owl devices (Plate 1, A).³⁶ With the adoption of this static, civic obverse for Athens' first tetradrachms, the traditional, changing moneyers' devices were now simply transferred to the tetradrachms' reverses, thus producing for the first time at Athens—and very possibly for the first time anywhere in Aegean Greece—a genuinely two-sided coinage.³⁷

The sole surviving tetradrachm of the gorgoneion/bull's head variety (Plate 2, 16) shares its obverse die (Seltman A 208) with several tetradrachms of the relatively large gorgoneion/lion's head issue.³⁸ The wear of the die on two of the lion's head tetradrachms (Plate 2, 17) indicates that the bull's head issue preceded the lion's head issue, as one might independently deduce from the didrachms that must accompany the tetradrachms.³⁹ Didrachms with the bull's head badge (Plate 2, 13) are

³⁴ On the position of the gorgoneion tetradrachms as immediate predecessors of the earliest owls, see "Owls," pp. 45–46; Hopper, p. 23; *ACGC*, p. 58.

³⁵ Seltman, pp. 50–52, 86–88, where the gorgoneion is termed the "official badge" as opposed to the bull's or lion's head "private badges."

³⁶ J. H. Kroll, *Athenian Bronze Allotment Plates* (Cambridge, Mass., 1972), pp. 43–44, 53–56, with plates, pp. 301–24. The gorgoneion appears again as an obverse type on an issue of Athenian bronze coins of the mid first century B.C. in a learned revival of the archaic type, see J. H. Kroll, "Two Hoards of First-Century B.C. Athenian Bronze Coins, *A Dell* 27 (1972), *Meletai*, pp. 98, 111, pl. 36, 16–20.

³⁷ Cf. "Owls," p. 60, which surveys the chronology of the earliest Greek bifacial coinages.

³⁸ Seltman, p. 195, pl. 14, nos. 315–18.

³⁹ The contemporaneity of the gorgoneion/lion's head didrachms with the tetradrachms with the same devices was recognized by Hopper, p. 23, and by M. Price and N. Waggoner, *Archaic Greek Coinage, the Asyut Hoard* (London, 1975), pp. 65–66.

of normal *wappenmünzen* type, with moneyer's device obverse and incuse-square reverse. The didrachms with the lion's head symbol (Plate 2, 14), however, have assumed a quasi-bifacial character in keeping with the new tetradrachm format. They bear the new civic gorgoneion type on their obverse and the magistrate's lion's head facing on the reverse, although in order to avoid any significant alteration of the traditional didrachm appearance, the lion's head is reduced to a tiny symbol and crowded into the upper triangle of the standard quadripartite incuse pattern.

There remain the related and more numerous didrachms with gorgoneion obverses but plain incuse-square reverses (Plate 2, 15). Since the gorgoneion/plain-incuse didrachms lack a moneyer's badge, one cannot insert them between the bull's head and the gorgoneion/lion's head didrachms. Logically, they must fall after the latter at the very end of the *wappenmünzen* didrachm series, an arrangement that seems to have support from obverse die linking. Hopper expresses uneasiness about Seltman's obverse linkage of Seltman nos. 88a and 90a (didrachms with lion's head reverse) to no. 87a (a worn didrachm with plain reverse) through anvil die A 60, but notes that 88a and 90a may share this A 60 die with the Ashmolean didrachm, plain reverse (Plate 2, 15).⁴⁰ The dulled features of the Ashmolean obverse show that it was struck from a worn die; so that, if the latter really is the same anvil die used for nos. 80a and 90a, it would prove the priority of the didrachms with lion's head to those with unadorned reverses.⁴¹

⁴⁰ Hopper, pp. 23-24, 27 (no. [g] 2), 36, with reference to Seltman, p. 165, pl. 4.

⁴¹ According to Hopper (pp. 23-24, 27), the Ashmolean didrachm shares its reverse die with Seltman no. 85a, a plain-reverse didrachm that Seltman also linked through A 60 to the lion's head didrachms nos. 88a and 90a. If the A-die identification is sound here, it would demonstrate again the precedence of lion's head over plain-reverse gorgoneion didrachms, since the anvil die of 85a is very worn and had developed a substantial crack at the left over the ear of the gorgoneion. By letter, Professor Hopper has pointed out to me that the long teeth of the gorgoneion of 85a suggest its obverse die is other than A 60. But the teeth could have been touched up or recut as the die was wearing down; certainly other idiosyncratic configurations in the face of the no. 85a gorgoneion closely match those on the gorgoneia of nos. 88a and 90a. There is no die evidence to suggest the opposite arrangement of gorgoneion didrachms, i.e. plain reverses before reverses with lion's head symbol.

However this may be, it is easy to see why, after a very short experimental phase, the diminutive lion's head was discontinued on the gorgoneion didrachms. The symbol was negligible enough to begin with and could never have been miniaturized still further for insertion into a triangle of the accompanying gorgoneion/incuse-square obols, which, to judge from the number extant, were struck in quantity.⁴² The lion's head would have been retained on the obols and didrachms if the Athenians were willing to introduce true reverse types on these denominations. But innovation in design was conservatively resisted except on the new tetradrachm denomination, which had no tradition behind it. As a result, the gorgoneion didrachms and obols became the first Athenian coins to have been struck without a magistrate's badge and served to institutionalize this feature prior to the adoption of the owl types.

The novelty of the tetradrachm denomination at the time of its introduction is emphasized by two pellets in the reverse field of some of the earliest gorgoneion/lion's head tetradrachms (Plate 2, 17). The pellets appear on two reverse dies, both of which are linked through the above-mentioned anvil die Seltman A 208 to the gorgoneion/bull's head tetradrachm, and occur in different locations on each of the reverse dies.⁴³ They are clearly intended as marks of value. Since the wappenmünzen didrachms have the same weight as contemporary (tridrachm) staters of Corinth and the same subdivisions as the somewhat heavier (didrachm) staters of Aegina, there is every reason to assume that the wappenmünzen didrachms were similarly recognized as "staters." The twin pellets on early wappenmünzen tetradrachms confirm this by indicating that the tetradrachms were officially regarded as doubles or distaters.

A final observation on the gorgoneion wappenmünzen concerns the purity of their silver. The six specimens (all obols) that have been analyzed show the same extremely low percentages of copper and gold as

⁴² Hopper, p. 36, mentions 51 surviving gorgoneion obols. Quarter obols were also struck; Seltman, p. 166, pl. 4, $\delta\delta$.

⁴³ Seltman, p. 89, n. 4; p. 195, pl. 14, nos. 317-18.

in the fifth-century owl coinage.⁴⁴ Kraay and Wallace have pointed out that the minimal copper and gold in the owl silver contrasts markedly with the inconsistent and considerably higher overall percentages of such impurities in the wappenmünzen, and they plausibly attributed the difference to different sources of silver for the two coinages. In as much as the owl coinage of the fifth century was doubtless struck from Laurion silver, the wappenmünzen silver ought to be non-Attic, imported in part from the Pangaeum region where the Peisistratids had mining interests.⁴⁵ High copper and gold content do not characterize the wappenmünzen as a whole, however, but only those analyzed specimens from pre-gorgoneion issues (with beetle, hindquarters of horse, pomegranate, and wheel obverses). The fact that the gorgoneion coinage was minted from the same silver as the owls implies that the shift from foreign to domestically produced silver must have taken place shortly before the gorgoneion issues. Not until systematic metallurgical analyses can be run on all the wappenmünzen issues and until the actual sequence of the pre-gorgoneion issues can be more securely reconstructed will it be possible to determine precisely when this changeover occurred.⁴⁶ But the process ought to have been a gradual one. And in this regard it is worth noting that of the 16 analysed wappenmünzen with wheel obverses,

⁴⁴ C. M. Kraay, *The Composition of Greek Silver Coins* (Oxford, 1962), p. 15, with diagrams 2 and 3; W. P. Wallace, "The Early Coinages of Athens and Euboea," *NC* 1962, p. 27. The similarity of the gorgoneion to the owl silver may be seen at a glance from the tables of Kraay and Wallace. One of the gorgoneion obols (Wallace, no. 21) has an exceptionally high copper percentage, but one finds such occasional high deviations also among the owl readings.

⁴⁵ Kraay (above, n. 44), pp. 16, 33–34; Wallace (above, n. 44), pp. 25–26, 28–30. The reservations voiced by E. J. P. Raven, "Problems of the Earliest Owls," *Essays Robinson*, pp. 56–57, are directed mainly at the assumptions that the change from imported to locally mined silver occurred with the beginning of the owl coinage and that all or most of the silver of the earlier coinage came specifically from Thracian-Macedonian sources.

⁴⁶ At present the sequence has to be reconstructed from considerations of style, from reverse die links between a few of the types, and from the association of the bull's head and gorgoneion didrachms with the late tetradrachms; see Hopper, pp. 19–24, 39. The arrangement of didrachm types in my plates follows the listing of Hopper, p. 38. Further metallurgical analyses may assist in the problem of relative chronology.

about half have a silver composition similar to the gorgoneion and owl silver while the remaining half contain impurities of a much higher magnitude. This at least suggests that exploratory workings in the upper veins at Laurion had been initiated and were becoming progressively more productive as the wappenmünzen coinage developed. Accordingly, by the time of the gorgoneion issues, production had become substantial enough to end Athens' dependence on foreign supplies.

3. TRANSITION TO THE OWLS

The pre-gorgoneion wappenmünzen differ from the early owl coinage not only in respect to the character of their types and silver but also as regards their main didrachm denomination, their relatively abundant fractions, and their limited circulation, for the hoard evidence makes it clear that the didrachms did not normally travel outside of Attica and Central Greece. In contrast, the owls featured fixed national types and an inscribed ethnic that emphatically identifies them as Athenian; their major denomination is the larger, more convenient and showy tetradrachm, which seems to have been struck with proportionally fewer fractions; and they have been found in vast quantities overseas, particularly in hoards in South Italy, Sicily and Egypt. From all this Kraay drew the necessary conclusions that the owls were minted primarily for international trade—Attic silver coined as a surplus commodity for export abroad—and that the change from the local wappenmünzen to the owl coinage reflected a fundamental redirection of Athenian monetary policy. The old didrachms with their personal types were replaced with the larger denomination owls that proclaim an Athenian origin specifically to facilitate the coins' recognition and desirability far from the borders of Attica.⁴⁷

⁴⁷ "Owls," pp. 48–49, 62–64. Also Kraay, "Hoards" (above, n. 20), pp. 80–83; and *ACGC*, pp. 60, 63, 319. Six hoards from Attica and Euboea consisted in whole or in part of wappenmünzen: *IGCH* 2, 3, 5, 9, 10, 12. In contrast, wappenmünzen didrachms and fractions that drifted into foreign hoards are limited to a standing horse didrachm and a forepart of a horse r. didrachm in Sakha 1897 (*IGCH* 1639), a wheel didrachm in Asyut 1968 or 1969 (*IGCH* 1644), a wheel didrachm in Fayum 1957 (*IGCH* 1646), another wheel didrachm in Taranto 1911 (*IGCH* 1874), and a wheel obol in Jordan 1967 (*IGCH* 1482). The sizable group of wheel and gorgoneion

We may now add that the circumstance that gave rise to this reform was the discovery of Attic silver in surplus proportions just before the gorgoneion issues and that the reform itself was evolutionary in nature. It began with the creation of the gorgoneion/bull's head tetradrachm, which introduced the two features most crucial for foreign export: a static national type and the larger, more ingot-like denomination. The tetradrachms were continued in a lion's head emission, whose six obverse and twelve reverse dies and considerable range in variant details suggest striking probably for about two or three years. If the office of mint magistrate was held for one-year terms (see below), it is possible therefore that some of the lion's head tetradrachms were struck under the supervision of one or more magistrates in addition to the one who originally chose the lion's head as a personal device. Once the moneyer was no longer receiving recognition on the accompanying gorgoneion didrachms and obols, such recognition could have easily been sacrificed on the tetradrachms, which, being designed for export, were best kept unaltered, their types frozen to insure acceptability in foreign markets.

However, even if only one moneyer was responsible for the full emission of lion's head tetradrachms, it must have become rapidly apparent that the hybrid half-publicly, half-privately signed gorgoneion tetradrachm was in the long run an imperfect form for encouraging demand for the new Attic silver. The solution was to eliminate the private symbol from the reverse, as had already been done on the gorgoneion didrachms. But this in turn presented the problem of whether to continue the gorgoneion obverse and add a second civic device to the reverse or whether to redesign the tetradrachms afresh, ideally along more explicitly "Athenian" lines. The latter course was wisely chosen and brilliantly executed by having the name of the city stated on both sides of the tetradrachms, through the head of eponymous Athena on the obverse and an inscribed ethnic on the owl reverse.

Since the population of Attica had long been accustomed to dealing in uniface didrachms, the domestic coinage remained essentially un-

didrachms and fractions alleged to have been found in Schubin, Poland (Seltman, pp. 133-34, 148), hardly belongs in this list; the provenance is doubtful in the extreme ("Owls," p. 49, n. 1), not least because the group has every appearance of being an Attic find.

changed until well into the early period of the owl coinage. Any change that did occur was due entirely to the influence of the foreign-directed tetradrachms. The gorgoneion type was not added to didrachms and fractions until after it had been adopted for the tetradrachms and for a while this was as far as the Athenians were willing to go. After only two experimental reverse dies with the lion's head symbol, the gorgoneion didrachms reverted to fully typeless reverses, even though this meant ending the long tradition of private symbol types on the local coinage. The continued striking of didrachms implies that the new tetradrachm denomination was apparently not intended nor expected to replace the didrachm stater in the local economy. Although the gorgoneion didrachms were minted in a quantity about twice that of the gorgoneion tetradrachms (see below), not one specimen of the former has yet been reported from a hoard outside of Attica or Euboea. The gorgoneion coins that did travel were those that were intended to, namely, the tetradrachms, which appear with remarkable consistency in overseas hoards also containing early Group H or L owl tetradrachms.⁴⁸ But since the gorgoneion tetradrachms turn up as well in hoards from Central Greece,⁴⁹ we see that the tetradrachms nevertheless achieved a swift popularity at home, with the result that the didrachm staters were ultimately discontinued.

Relatively few owl fractions seem to have been minted during the earliest, Group H period of the owl coinage. Seltman lists just eight Group H obols and one hemiobol. More significantly, all of these fractions are by style related only to the later Group H tetradrachms.⁵⁰ As

⁴⁸ Single gorgoneion/lion's head tetradrachms are represented in the Benha 1929 hoard (*IGCH* 1640), which contained Group H and L owls, and in two hoards cited in the preceding note: Asyut (with numerous Group L and later owls) and Taranto (five Group H owls). Raven (above, n. 45), p. 58, n. 1, notes a gorgoneion/bull's head tetradrachms in Motya, Sicily, presumably from a hoard there.

⁴⁹ Athens ca. 1788 (*IGCH* 2); Eleusis ca. 1883 (*IGCH* 5), see n. 51 below; and Eretria ca. 1870 (*IGCH* 9).

⁵⁰ Seltman (p. 192) rightly notes that the Group H obols and hemiobol (his pl. 22, ν and ξ) have their only close obverse and reverse stylistic parallels in the tetradrachms, Seltman, nos. 300 a and b (his pl. 13, A 196, P 245). Raven (above, n. 45), p. 51, verifies that the late position of these tetradrachms in Group H "is confirmed by die-linking as well as style."

with the gorgoneion device, the owl types, devised specifically for the export tetradrachms, appear on smaller internal denominations only after an interval, which in the case of the owl types was almost certainly a matter of a few years. During most of the Group H period the small change of Attica therefore must have continued to consist of wappenmünzen. The Eleusis 1883 find (*IGCH* 5) shows in fact that wappenmünzen fractions and tetradrachms circulated as late as the second, Group L phase of the owls.⁵¹ And if these small and largest denominations remained in circulation, there is no reason to doubt that the wappenmünzen didrachms did likewise.⁵²

On the strength of an anecdote in the pseudo-Aristotelian *Economics* (2.2.4) about Hippias demonetizing and calling in the coinage, it has been proposed that the wappenmünzen were collected and melted down for restriking into owls at the time when the latter were introduced.⁵³ But unless such a restriking was improbably selective, it would have left the Athenians with no coins but tetradrachms until near the end of the Group H period. Furthermore, a hypothetical recoinage at the end of the wappenmünzen series would have had an especially deleterious effect on the survival rate of the latest, gorgoneion wappenmünzen. Yet of all varieties of wappenmünzen didrachms, it is precisely the gorgoneia

⁵¹ The excavated find included three wheel obols, a gorgoneion obol, a bull's head hemiobol, a Group L hemidrachm (like Plate 2, 23)—all corroded together in a lump—and a gorgoneion/lion's head tetradrachm that was found "nearby" at the same level. The association of the tetradrachm is probable since the hoard may very well have been disturbed by later building operations in the Telesterion area where it was found, see U. Koehler, "Numismatische Beiträge," *MDAI(A)* 9 (1884), pp. 357–58. The Acropolis 1886 find (*IGCH* 12) combines wappenmünzen "wheels" with owls of a much later date; but since there are no intermediate pieces to link these two groups, the find has every appearance of being a collection of two dedications rather than a currency hoard (compare Price and Waggoner [above, n. 39], p. 20). The coins appear to have been exposed to fire (Seltman, p. 147, n. 1), an indication that they were housed in one of the treasuries or temples put to the torch by the Persians in 480.

⁵² The Pascha 1883 find (*IGCH* 10) contained seven wappenmünzen didrachms, including gorgoneia, along with Group H and/or L and Group Gi owls; but since this is an Euboean hoard, it does not necessarily reflect the contemporary pattern of circulation in Attica.

⁵³ R. T. Williams, "The 'Owls' and Hippias," *NC* 1966, pp. 12–13; *ACGC*, pp. 59–60.

that have survived in the greatest numbers.⁵⁴ Now the story about Hippias can alternatively be understood to mean that, having declared the existing coinage *adokimon* and having called it in on the pretext of restriking it, Hippias—once the coinage was collected—handed back the same coins unchanged while keeping a percentage through an exchange rate favorable to himself. The available numismatic evidence strongly favors this second interpretation, which makes for a more ingenious and profitable scheme on Hippias' part—the point, of course, of the anecdote—and could have occurred with any coinage at any time during his tyranny.⁵⁵

If wappenmünzen didrachms and fractions continued to circulate in Attica down into the time of the Group H tetradrachms, might not the minting of gorgoneion didrachms and obols have continued into this period as well? The possibility cannot be dismissed. Hopper counted 10–13 obverse dies for the gorgoneion didrachms,⁵⁶ a number that is considerably in excess of the six obverse dies known for the gorgoneion/lion's head tetradrachms. Had the gorgoneion didrachms been discontinued when the gorgoneion tetradrachms were replaced with the owl tetradrachms, the didrachms would have been struck in a concentration approximately double that of the tetradrachms, even though the latter were coined primarily for the export of surplus silver, and even though throughout the succeeding owl coinage the mint seems regularly to have coined more heavily in tetradrachms than in smaller denominations.

⁵⁴ Hopper notes (p. 39) that “in the case of the gorgoneia...a surprisingly large number have survived with identical dies.”

⁵⁵ In his commentary, van Groningen (above, n. 28), p. 72, emphatically argues for this second interpretation on textual grounds alone. Price and Waggoner (above, n. 39), p. 67, accept Williams' interpretation but suggest that Hippias recoined earlier wappenmünzen at the time that the gorgoneion tetradrachms were introduced; but this is not supported by the evidence of hoards, especially Athens ca. 1788 (*IGCH* 2) which contained both early wappenmünzen and gorgoneia.

⁵⁶ Hopper (p. 38, item [e]) mentions “16 or 19” anvil dies for “gorgoneia of the two groups with and without the lion-mask in the reverse.” The context suggests that these are didrachm gorgoneia only. But by letter Professor Hopper has confirmed to me that the 16–19 total includes the six anvil dies of the gorgoneion tetradrachms, leaving only 10 to 13 for didrachms. See Hopper, pp. 27, 34–36, where approximately nine obverse dies are identified from didrachms catalogued by Seltman and two dies are added from didrachms not in Seltman.

Moreover, after the striking of didrachms on such an impressive scale, the production of didrachms and obols would have been brought to a sudden halt with no fractions being struck for domestic use until late in the Group H owls. If, on the other hand, the gorgoneion didrachms and obols were minted down through most of the Group H period, the result would have been a continuous minting of and natural balance between tetradrachms, didrachms, and obols during both the gorgoneion/lion's head and the Group H emissions.⁵⁷ Unfortunately, although this last reconstruction has its undeniable attractions, it cannot constitute proof that some of the gorgoneion didrachms and obols were struck alongside Group H tetradrachms. The question must remain open.

One thing does seem clear, however. The production of owl obols and hemiobols toward the end of the Group H emissions could at best have only supplemented the smaller wappenmünzen denominations that were serving as Athens' main retail currency. It was in the following Group L coinage that the Athenians were for the first time provided with a full range of post-wappenmünzen denominations, including the first owl drachms (the first drachms, incidentally, to have been struck since the wappenmünzen wheel issues) but excluding the didrachm denomination, which is conspicuous by its absence.⁵⁸ While wappenmünzen didrachms and fractions probably still continued in circulation, they were now being systematically replaced by owl drachms and fractions, just as the wappenmünzen tetradrachms had been replaced by Group H owls earlier. In effect, the transformation from wappenmünzen to owls in the local economy of Athens was not fully achieved until the minting of Group L.

4. CHRONOLOGICAL DEDUCTIONS

One consequence of identifying the wappenmünzen types as magistrates' signatures is the strong probability that, with the exception of the unchanging gorgoneion, each type was normally employed for a

⁵⁷ In the bull's head issue there were three didrachm obverse dies but only one obverse die for the tetradrachm denomination. However, the last die (Seltman A 208; above, n. 38) was transferred to the next issue of lion's head tetradrachms while still fresh and was then employed with three of the lion's head reverse dies, which implies that the striking of gorgoneion tetradrachms did not commence until near the very end of the bull's head issue, well after many didrachms had already been struck.

⁵⁸ On the Group L fractions see below, pp. 25–30.

single year. From archaic times onward Athenian magistrates held office for one-year terms. Although a man might be confirmed in the same office for two or more years in succession, this was the exception rather than the rule and must not be taken to mean that the magistracy itself was other than annual in duration.⁵⁹ For instance, the Athenian New Style silver gives abundant information about the sequence of monetary magistrates in Hellenistic Athens. The month dates on the coins prove that the magistrates and issues were organized on an annual basis, and the list of magistrates' names shows that the office was rarely held for more than one year at a time. When it was, for example during the three years when Xenokles and Harmoxenos signed the coinage, a separate symbol was chosen to distinguish each of their three issues.⁶⁰

In terms of mint supervision and constitutional organization generally, Athens of course was not unique. The coinages both of Samian Zankle in the 490s and of Samos itself later in the fifth century were demonstrably struck in annual issues, each year distinguished by a sequential letter.⁶¹ Despite the recent reservations of Price and Waggoner, the moneyers' names and symbols on Abderite silver of the late sixth through the fourth century are still best understood as the names of annual magistrates.⁶² The inscribed monetary pact between Phocaea and Mytilene of the late fifth or early fourth century informs us that the respective electrum issues of these cities were to be struck on a yearly basis.⁶³ The numerous Hellenistic coinages that are dated by regnal years or by dates reckoned from a local era were clearly annual in organization.⁶⁴

⁵⁹ W. S. Ferguson, *Hellenistic Athens* (London, 1911), p. 476, excepts only the *athlothelai* of the Panathenaic festival, who served four-year terms.

⁶⁰ Thompson (above, n. 27), pp. 344–46, 354–62, 590.

⁶¹ Barron (above, n. 12), pp. 40–45, esp. n. 19; pp. 59–62.

⁶² Price and Waggoner (above, n. 39), p. 37, criticizing May (above, n. 23), pp. 83–86. But the absence of coins of May's Period II from the Demanhur hoard and of Period III from the Asyut hoard does not require that the periods necessarily began after the respective burial dates of the hoards. For a plausible "middle" chronology of early Abderite silver, see R. R. Holloway's reviews of May, *AJA* 71 (1967), p. 321, and of Price and Waggoner, *Gnomon* 50 (1978), p. 597.

⁶³ M. N. Tod, *Greek Historical Inscriptions*, 2 (Oxford, 1948), no. 112; see also *ACGC*, p. 262.

⁶⁴ *HN*, pp. lxxxv–lxxxvi.

Granted that the wappenmünzen are earlier than any of this evidence, the size of most of the issues points clearly to emissions of short duration, easily of a year or less. Eight of the didrachm varieties (amphora, triskeles, beetle, astragal, crossbar wheel, standing horse, horse hind-quarters, and owl) employed only one or, in most cases, two known obverse dies.⁶⁵ The late bull's head issue employed only three attested anvil dies for didrachms and one for the tetradrachms, few of which could have been struck since the die continued to be used later for gorgoneion/lion's head tetradrachms (above, n. 57). Only five of the wappenmünzen didrachm emissions were larger:

Horse forepart l.	7 obverse dies
Horse forepart r.	4 obverse dies
Strutted wheel	8–10 obverse dies
Unstrutted wheel	4 obverse dies
Gorgoneion	10–13 obverse dies (above, n. 56), of which 2 were used with a reverse with small lion's head; plus 6 obverse dies for tetradrachms.

The first of these may have been of longer duration than the usual wappenmünzen didrachm issues or may simply have been an annual striking of a more intensive nature, belonging to years when more coinage was needed or more silver was available. The annual organization both of Athenian government and of most Greek coinages in general make the latter the more probable alternative. As always, the gorgoneia are a special case. Only two anvil dies were employed with the magistrate's reverse lion's head symbol; the rest continued as long as the gorgoneion/lion's head tetradrachms were minted and possibly even later into the early years of the Group H owls. As explained above, a protracted striking of the tetradrachms over two or three years need not conflict with an annual term of the moneyer's office since the private reverse type may very well have been frozen in order to maintain familiarity abroad.

⁶⁵ My die count here and below is drawn from Hopper, pp. 26–36, 38 (item [e]), in his review of and addenda to Seltman's die record. Hopper cautions against accepting his results with any finality. But they could hardly be more rigorous and are as reliable as any we can expect for a long time to come. Further discoveries will no doubt add new dies, but probably not in significant numbers.

The only pre-gorgoneion didrachms that are difficult, but not impossible, to reconcile with the annual principle are those with the type of strutted wheels (Plate 1, 10). The problem is complicated immensely by the uncertainty of whether the formal differences between the strutted and unstrutted wheel (Plate 1, 11) types were significant, since some of the wheel didrachms with small struts and a large hub can be regarded as transitional between the two main types.⁶⁶ It is equally uncertain whether the unstrutted wheels followed the strutted ones without the intervention of an issue with another obverse device. If both wheel types were successive, both could have belonged to one exceptionally copious emission that was struck under one official, whose symbol may have been slightly modified to distinguish later from earlier striking. In that case, the wheels with small struts and a large hub could be transferred from the strutted to the unstrutted category, allowing the emission to be divided into two annual phases with a more equal number of obverse dies expended in each. Whatever the truth of the matter, at least two years for the two wheel types are necessary.

Counting strutted and unstrutted wheels separately, and counting the lion's head but not the public gorgoneion device, there are a total of 14 private devices on wappenmünzen didrachms and tetradrachms. To these should be added at least some of the four devices that appear on fractional pieces attributed to the Athenian wappenmünzen because of their weight and reverse technique: frog (obols), pomegranate (hemio-bols), leaf (hemio-bol), and eye (quarter-obols).⁶⁷ If a year is allotted to each of the private types and an extra year or two for the prolonged striking of the gorgoneion/lion's head tetradrachms, a minimum span of about 18–20 years is probable for the wappenmünzen coinage from its inception to the introduction of the owl tetradrachms. A realistic maximum, which allows for occasional years when no coinage was produced and a possible extra year for one or two of the larger didrachm issues, ought not to be greater than about 30 years. Absolute dates for these estimates must be anchored to the date of the earliest owl tetradrachms.

⁶⁶ Esp., Seltman, p. 156, pl. 2, A-die no. 25. On the problems of the wheel types, Hopper, pp. 19–20, 39.

⁶⁷ Seltman, p. 157, pl. 4, ω ; p. 167, pl. 4, ϕ , $\epsilon\epsilon$, and $\zeta\zeta$. Svoronos (above, n. 26), pl. 1, 41–48. Apparently none of these fractions has a recorded provenience.

In the most recent and thorough review of the relevant hoard data Price and Waggoner concluded that "a date much before 510 for the introduction of the owls is, on present evidence, unlikely."⁶⁸ On the assumption that a dramatic change in Athenian coinage might be expected to reflect a dramatic break in Athenian political history, they went on to associate the earliest owls with the oligarchic government that came to power after the expulsion of Hippias in 511/10 (as Wallace had argued earlier) or with the democratic government inaugurated by Cleisthenes in 507/6.⁶⁹ It is implicit in this view that the change to the owls was politically motivated, the owl types being somehow anti-tyrannical or pro-democratic in intent. But the types are entirely ethnic in character; and their adoption, as Kraay recognized and as has been demonstrated in more detail above, was motivated wholly by economic considerations.

Nor was the innovation of the owl tetradrachms quite so dramatic as has previously been assumed. It was merely the final, logical step in an experimental evolution that began with the creation of the tetradrachm denomination and the civic gorgoneion type, themselves responses to the discovery of unprecedented quantities of silver ore at Laurion. Starting under the magistrate with the bull's head symbol, continuing probably for about two or three years with the gorgoneion/lion's head tetradrachms, and involving a final year for the first Group H owl tetradrachms, the evolution was about four or five years in the making and reflects the development and perfection of a single policy aimed at en-

⁶⁸ Price and Waggoner (above, n. 39), p. 64.

⁶⁹ Price and Waggoner (above, n. 39), pp. 64–65; Wallace (above, n. 44), pp. 28, 35. Price and Waggoner suggest that the owl types remained unchanged for 300 years, because, once introduced after 510, they came to symbolize democracy and freedom from tyranny. But far from advertising Athenian internal politics, the longevity of the types, like the archaism of their style in the later fifth century, was surely to perpetuate the popularity of Athenian silver in international trade. One must agree with these authors (p. 132, n. 92) that the obol with owl types but the abbreviated name of Hippias (Seltman, pl. 22.π) was probably struck by the latter during his exile. But Hippias would hardly have used these types if they were introduced after his tyranny and were recognized as having anti-tyrannical implications. See Raven (above, n. 45), p. 52; and C. M. Kraay, "The Asyut Hoard: Some Comments on Chronology," *NC* 1977, p. 196, n. 23; and R. Glynn, "Herakles, Nereus and Triton," *AJA* 85 (1981), p. 131.

couraging the demand for Athenian silver in international trade. This evolution in tetradrachms, moreover, was begun not by breaking with the earlier wappenmünzen didrachm coinage—for gorgoneion didrachms continued to be minted and the gorgoneion tetradrachms (and earlier didrachms) retained the private magistrate symbol on their reverses—but as a parallel offshoot from it. All of this eliminates at once the oligarchy of 510 or the democracy of a few years later, since it was the achievement of a single, stable, and economically minded government that was at the outset accustomed to striking the traditional, privately signed didrachms. The established government in question should be that of Hippias.

Kraay and others have attributed the earliest owl tetradrachms to Hippias on less complete evidence.⁷⁰ From pseudo-Aristotle we know that Hippias was remembered later in antiquity for his shrewdness in financial and monetary affairs. We may now attribute to him the far-reaching policy that included not only the introduction of the gorgoneion and owl tetradrachms as a coinage for exporting Attic bullion but probably also the increased exploitation of the Laurion mines that made such export possible.

We have seen that the shift from the gorgoneion to the Group H owl tetradrachms did not complete the development of the owl coinage. So far as the local currency of Attica was concerned, the important concluding step was the provision of the systematic range of small denominations that accompanied the Group L tetradrachms. Some of these Group L fractions are notable for their unusual iconography, which prompted Kraay to remark that the types were likely to have a topical significance.⁷¹ This might be expected for types designed for local consumption, and, if true, should settle whether Group L was struck under Hippias, along with Group H, or whether it belongs after his downfall.

The most remarkable of the fractions is the hemidrachm in Berlin with Athena head obverse but a reverse picturing the head of a negro surrounded by the customary AΘE inscription and olive spray (Plate 2,

⁷⁰ "Owls," pp. 58–59, 64; *ACGC*, p. 61. Raven (above, n. 45), p. 52, 58. Williams (above, n. 53), pp. 9–12.

⁷¹ "Owls," p. 62, n. 2.

22).⁷² The authenticity of the piece is assured by its obverse die link to some of the relatively common Group L hemidrachms with the reverse type of a female head (Plate 2, 23).⁷³ Seltman identified the negro as Delphos, the eponym of Delphi, whose negro head appears on fifth-century trihemioiols of Delphi.⁷⁴ The mother of Delphos was variously known as Melantho, Melaina, Melanis, or Kelaino, i.e. black woman. The identification is certainly no more extraordinary than the type itself and virtually requires that the coin was struck right after 511/10 as an acknowledgement of the pivotal role played by Delphi in the expulsion of Hippias.

A second exceptional reverse die, used for the earliest Group L drachms, displays an owl standing on a floral branch with its right wing held at a right angle from its body (Plate 2, 20).⁷⁵ Raven recognized a probable topical reference here by observing that a bird that raised its left wing in an oracular context was regarded by the ancients as giving an unfavorable omen.⁷⁶ Accordingly, the drachm owl with raised right wing should be auspiciously signaling an event of some importance. It is hard to think of any success in the last years of Hippias' tyranny that would qualify for such recognition. If, on the other hand, the drachms are dated after 511/10, they would of course be celebrating the freedom that Athens won in that year. What makes the latter possibility especially attractive was the erection of the bronze statue group of the tyrant slayers Harmodius and Aristogeiton in the center of the Athenian Agora in 510/9.⁷⁷ This was, so far as we know, the first politically com-

⁷² Seltman, p. 200, pl. 22, *aa*; Svoronos (above, n. 26), pl. 7, 36.

⁷³ Seltman, p. 200, pl. 22, *ω, ββ*; Svoronos (above, n. 26), pl. 7, 26–35.

⁷⁴ Seltman, p. 97. The identification of Delphos both on the coins of Delphi (*BMCCentral Greece*, pl. 4, 6–8) and on the Athenian hemidrachm is endorsed by F. M. Snowden, Jr., *Blacks in Antiquity* (Cambridge, Mass., 1970), pp. 150–51.

⁷⁵ Seltman, p. 199, pl. 22, *τ*; Svoronos (above, n. 26), pl. 7, 16–19. Subsequent Group L reverse dies adopt the conventional tetradrachm owl type with folded wings and no branch (Plate 2, 21): Seltman, pp. 199–200, pl. 24, *v-φ*; Svoronos, pl. 7, 20–22.

⁷⁶ Raven (above, n. 45), p. 52.

⁷⁷ The 510/9 date given by Pliny (*NH* 34.17) is persuasively defended by C. W. Fornara, "The Cult of Harmodius and Aristogeiton," *Philologus* 114 (1970), pp. 157, n. 19. See also, M. Ostwald, *Nomos and the Beginnings of Athenian Democracy* (Oxford, 1969), pp. 132–33. On other revolutionary enactments of 510/9—a law against tyranny, the proscribing of the Peisistratids, a law forbidding torture of

memorative monument ever commissioned at Athens. As such, it vividly attests to the euphoric emotional climate that accompanied the liberation of Athens and provides a striking non-numismatic parallel both for interpreting and dating the commemorative coin type.

According to two Attic drinking songs about Harmodius and Aristogeiton, the tyrannicides would seem to have concealed their weapons in myrtle boughs before striking their glorious blows for freedom. One of the songs goes:

In a branch of myrtle I shall carry my sword,
Just like Harmodius and Aristogeiton
When at the festival of Athena
They slew the tyrant man Hipparchus.

The companion song begins with the same opening couplet but concludes “. . . when they slew the tyrant and made Athens a place of equality before the law (*isonomia*).”⁷⁸ Might not the floral branch on which the drachm owl is standing represent this famous branch of myrtle? Terminating in a stylized floral palmette, the branch on the coins is clearly not the olive branch that is normally associated with Athenian owls. (Compare the standard olive spray located in the upper left-hand corner of the reverse above the owl’s raised wing.) And like the Panathenaic amphorae or ships’ prows beneath the feet of owls on some later Athenian coins,⁷⁹ the branch must have had some special meaning. There are reasons for questioning whether Harmodius and Aristogeiton actually

Athenian citizens, and the purging of the citizenship rolls—see Ostwald, pp. 140–42. On the “Tyrannicides” groups (a second one was set up after 480), see S. Brunnsåker, *The Tyrant-Slayers of Kritios and Nesiotes* (Lund, 1955).

⁷⁸ For texts, commentary, and bibliography (prior to Fornara’s fundamental paper): C. M. Bowra, *Greek Lyric Poetry*, 2nd ed. (Oxford, 1961), pp. 392–96; Ostwald (above, n. 77), pp. 121–36, 182–85.

⁷⁹ The Panathenaic amphora beneath owls on the New Style silver requires no comment. Owls on ship’s prow: Svoronos (above, n. 26), pl. 23, 41–42, 50–52; pl. 80, 37–43. It is probable that the prow on this last variety, which is early Augustan in date, refers to Actium; see Kroll, “Two Hoards” (above, n. 36), p. 100, pl. 39, 7–11.

hid their weapons in boughs (or sprays) of myrtle,⁸⁰ but this is of little consequence for interpreting the coins. The drinking songs ostensibly imply that the tyrannicides did carry such branches; and the popularity of the songs, at least one of which was presumably composed right after the assassination of Hipparchus in 514,⁸¹ some years before the coins, would have been enough to equate myrtle boughs with freedom from tyranny in the minds of the Athenian oligarchs by whom the songs were sung. If the branch on the coins is not a myrtle branch, it is likely to be, as suggested by the head of Delphos on the contemporary hemidrachm, a branch of Apollo's laurel.

There is finally the curious Janiform female head on the obverse of the Group L quarter drachms (Plate 2, 24).⁸² The head should represent

⁸⁰ Exhaustive discussion in Ostwald (above, n. 77), pp. 182–85. But I am not persuaded that a sword or dagger could not be hidden in a bough or spray of myrtle; one must credit Greek conspirators with some ingenuity. Nor is it unthinkable that myrtle was carried at the Panathenaea. Myrtle branches were commonly used in the performance of prayers, sacrifices, and everyday religious observances of various kinds; see the references collected in B. B. Roger's edition of Aristophanes, *Thesmophoriazusae* (London, 1904), note on line 37. And apart from some of the participants in the Panathenaic procession, we simply do not know what Athenians were accustomed to carry with them on the concluding day of the festival. A more serious difficulty arises from Aristophanes, *Storks*, frag. 430 (Koch), according to which a myrtle branch was held by the singers of these and other songs at drinking parties, passed from singer to singer as each took his turn. Since this custom may go back before 514, the branch referred to in the Harmodius songs could be the one held by the singer rather than one used in the assassination of Hipparchus; so Bowra (above, n. 78), p. 392, n. 1. But, as Ostwald notes, this interpretation is rather awkward for the straightforward language of the songs. The best solution is still the one advanced by commentators in antiquity, namely, that Harmodius and Aristogeiton did indeed carry myrtle branches at the Panathenaea. That branches of this same bush were also passed around at symposia may be pure coincidence; for the myrtle was one of the more popular plants for festive occasions, including Athenian weddings and (in the crowns of initiates) at the Eleusinian Mysteries. See *RE* 16, s.v. "Myrtos," cols. 1180–81 (Steier); D. B. Thompson, *Garden Lore of Ancient Athens*, Excavations of the Athenian Agora Picture Book No. 8 (Athens, 1963), figs. 43, 48.

⁸¹ Ostwald (above, n. 77), pp. 125–26, allows an early composition for only the first Harmodius song. But by showing that *isonomia* was originally an aristocratic political slogan, Fornara (above, n. 77), pp. 172–80, has removed objections to a pre-510 date for both versions.

⁸² Seltman, p. 200, pl. 22, δδ, εε; Svoronos (above, n. 26), pl. 7, 38–43.

Athena, for no other deity appears on the obverses of Athenian coins until well into Hellenistic times. The relevance of the type, however, has to be deduced from Janiform heads on other coinages. The Janus found so commonly on coins of the Roman Republic was a god of beginnings and endings; and his depiction with conjoined heads looking forward and backward is apparently derived from Greek double herms, monuments that originally served as road markers.⁸³ This last, journey-marking aspect may explain the choice of a Janiform female head as the obverse device of Lampsacene silver of the fifth and fourth centuries,⁸⁴ inasmuch as Lampsacus was situated at the mid-point of the Hellespont, halfway between the Aegean and the Sea of Marmara. And possibly as a temporal signpost, marking the end of one era and the start of a new one, a Janiform female head appears on coins of Syracuse during the 344–317 democracy restored by Timoleon, along with other deities (Zeus Eleutheros and Artemis Soteira) and the device of a free horse that manifestly allude to liberation from tyranny.⁸⁵ One can only speculate, but if the last is a valid parallel for the Janiform Athena on the Group L quarter drachms, the type would, like the head of Delphos and the propitious owl on myrtle or laurel bough, be singularly appropriate at Athens in 510/9.

In Seltman's arrangement, these fractions fall very early though not necessarily at the very beginning of Group L, so that it is possible that a

⁸³ L. A. Holland, *Janus and the Bridge*, American Academy in Rome Papers and Monographs 21 (Rome, 1961), pp. 70, 275–76, with references; *RE* 8, s.v. "Hermi," cols. 700–701, 706 (Eitrem). Since a three-headed herm, which doubtless stood at a juncture of three roads, is mentioned by Philochorus as having been set up by a lover of Hipparchus (*FGH*, no. 328, frag. 22 [Jacoby], with commentary), it is clear that double herms must go back as early as the sixth century as well.

⁸⁴ Baldwin (above, n. 11), pp. 57–63, pls. 5–6; see also *ACGC*, pp. 244–45, 255, pl. 54, 913–15, 917. The discussion of the Janiform type at Lampsacus by Baldwin, *The Electrum Coinage of Lampsakos* (New York, 1914), pp. 22–24, is devoted to a rebuttal of the theory of Six and Babelon that the Janiform heads on the Athenian and Lampsacene coins reflect the marriage alliance between Hippias and Hippocles, the tyrant of Lampsacus (Six [above, n. 26], pp. 173–75; *Trailé*, pt. 2, vol. 1, cols. 185–86, 383–86, 751–55). Baldwin emphasized that the relevant coins of the two cities cannot be contemporaneous but was unable to explain convincingly the types otherwise.

⁸⁵ B. D. Head, *On the Chronological Sequence of the Coins of Syracuse* (London, 1874, reprinted from *NC* 1874), pp. 24–33, pl. 6, 1, 15–16; pl. 7, 8, 10.

few tetradrachm dies of that group might belong under Hippias just before 510. The Group H owls certainly belong to this time, however; and if Seltman and Price-Waggoner were correct in estimating a span of about five years for the 14 known Group H anvil dies,⁸⁶ the owl types would have been introduced around or just before 515. I conclude with the following determinations:⁸⁷

Wappenmünzen initiated between 546 and ca. 535;
 Gorgoneion tetradrachms begun ca. 520–518;
 Earliest owl tetradrachms (Group H) begun ca. 517–515;
 Earliest Group L fractions struck 510/9.

ADDENDUM

I regret that the above had gone to press without my knowledge of three discussions relevant to the Group L fractions. P. Bicknell, "The Date of the Archaic Owls of Athens," *AC* 38 (1969), pp. 175–80, anticipates my conclusions concerning the triobol with negro head and the consequent dating of the Group H and L owls. Alternatively, E. Simon, "Aphrodite Pandemos auf attischen Münzen," *SNR* 49 (1970), pp. 5–19, pls. 1–2, accepts Seltman's dating of Group L to the time of the Cleisthenic democracy and interprets the exceptional iconography of three of the Group L fractions as representing Aphrodite Pandemos, whose cult Pausanias (1.22.3) and Apollodorus (*FGH*, no 244, frag. 113 [Jacoby] respectively associated with the *synoikismos* of Attica and the early public assemblies of the Athenian *demos*. According to Simon's identifications, the obverse Janiform head on the Group L quarter drachms (Plate 2, 24) depicts the conjoined heads of Aphrodite Pandemos and Peitho, who shared a sanctuary on the southwestern slope

⁸⁶ Seltman, p. 111; Price and Waggoner (above, n. 39), p. 65–68.

⁸⁷ For approximate dates of the remaining pre-480 owl groups, see Price and Waggoner (above, n. 39), p. 68.

I warmly thank H. A. Cahn, E. D. Francis, R. J. Hopper, C. M. Kraay, and M. J. Price for reading this paper in an earlier draft. The article has profited substantially from their criticisms, although I alone remain responsible for the views expressed.

of the Acropolis; the reverse female head on the normal Group L hemidrachms (Plate 2, 23) is that of Aphrodite Pandemos alone; and the negro head of the first Group L hemidrachm reverse die (Plate 2, 22) represents an Ethiopian-Arabian attendant of Aphrodite Pandemos.

This last identification seems especially unconvincing, for nowhere in the iconography of Aphrodite in vase painting or other media is the goddess ever shown in the company of black attendants. Nor does Simon's interpretation plausibly account for the use of the negro head as an obverse type on coins of Delphi. This unusual head on the Delphic coins, together with its brief appearance in Athenian coinage around the time that Alcmaeonid relations with Delphi had become a decisive factor in Athenian politics, still strongly favors the old identification of the negro as the mythological eponym of Delphi. Simon (along now with L. Lacroix, *Études d'archéologie numismatique* [Paris, 1974], pp. 37-51, the third discussion I had overlooked) objects that no Greek hero or eponym is otherwise known to have been represented with a non-Greek physiognomy, but this cannot rule out the possibility of one vivid exception.

On the other hand, Simon's equation of the female head of the remaining Group L reverse hemidrachm dies with Aphrodite Pandemos has undeniable attractions and, if correct, should probably associate these later hemidrachms with the establishment of democracy in 507/6. Hence, if the earliest hemidrachm reverse does indeed represent Delphos, this initial reverse type with its specifically Alcmaeonid implications is very likely to have antedated 507/6 but was discarded in that year in favor of the (?)Aphrodite Pandemos reverse symbolic of Cleisthenes' new program for the democratic reorganization of Attica. In this connection it should be noted that the change from the negro to the female head on the hemidrachms after one reverse die is paralleled by the change from the owl on floral spray to the normal owl reverse also after one reverse die on the Group L drachms. Whether one begins the Group L fractions in 510/9, as argued above, or in the following year or two just before 507/6, Group H would still have to fall before 511/10.

As for the even more problematic Janiform female head on the Group L quarter drachms, Simon's Aphrodite-Peitho solution seems too narrowly based on local Athenian cult to explain the later adoption of the type on coins of Lampsacus and Syracuse.

KEY TO PLATES

A. Athenian bronze allotment plate, mid-fourth century B.C. (Brooklyn Museum). Reproduced from Kroll (above, n. 36), p. 320, fig. 149.

Wappenmünzen didrachms

1. Amphora (BM)
2. Triskeles (Berlin)
3. Forepart of horse l. (Oxford)
- ^a4. Beetle (BM)
5. Astragal (BM)
- ^a6. Crossbar wheel (Berlin)
7. Standing horse (Paris)
8. Forepart of horse r. (BM)
9. Horse hindquarters (ANS)
10. Strutted wheel (Oxford)
- ^a11. Unstrutted wheel (Paris)
12. Owl (Berlin)
13. Bull's head (BM)
14. Gorgoneion/lion's head symbol (BM)
15. Gorgoneion/plain rev. (Oxford)

Wappenmünzen tetradrachms

16. Gorgoneion/bull's head (BM)
17. Gorgoneion/head and paws of frontal lion (BM)

Group H

18. Tetradrachm (BM)

Group L

19. Tetradrachm (Oxford)
- ^b20. Drachm: owl on floral branch, r. wing raised (obv. Athens/rev. Berlin)
- ^b21. Drachm: owl as on tetradrachms (Paris)
- ^a22. Hemidrachm: rev. negro head (Berlin)
- ^b23. Hemidrachm: rev. female head (Brussels)
- ^c24. Quarter drachm: obv. Janiform female head (Athens)

Coin photos reproduced from *ACGC*, pls. 9–10, except: ^a Svoronos (above, n. 26), pl. 1 or 7. ^b Seltman, pl. 22. ^c NC 1895, pl. 7.

THE CAVALLA HOARD (*IGCH* 450)

(PLATES 3–9)

MARGARET THOMPSON

In 1952 the American Numismatic Society acquired a hoard of some 340 silver coins¹ said to have been found at Cavalla in the course of the preceding year. It consisted primarily of drachms of Alexander type struck in the name of Alexander, Philip III or Lysimachus. Seven of the mints represented are now being prepared for final publication, which will include full details of the various issues involved; only totals for these mints are provided here :

Miletus	20
Sardes	35
Lampsacus	50
Abydus	42
Colophon	88
Magnesia	35
Teos	8

278

¹ The count in *IGCH* is 342; the present record lists 338. Photography for this article is the work of Robert J. Myers to whom I am most grateful. I am also deeply indebted to Otto Mørkholm for very helpful comments on the text.

The hoard also contained the following miscellaneous striking:

ALEXANDER III²

TETRADRACHMS

*Amphipolis*³

- | | | |
|---|-------------------------------|--------------------------|
| 1. <i>Rev.</i> to l., ivy leaf. 16.91 ↑ | <i>Demanhur</i> 266 | ca. 333/2 |
| 2. <i>Rev.</i> to l., dolphin. 16.83↓ | <i>Demanhur</i> 509 | ca. 330/29 |
| 3. <i>Rev.</i> ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ;
to l., ☰ . 17.02 ← | <i>Demanhur</i> 1488 | ca. 322/1 |
| 4. <i>Rev.</i> to l., ear of grain;
below, ☶ . 16.86 → | <i>Reattrib.</i> p. 16,
54 | ca. 318–315 ⁴ |
| 5. As no. 4. 17.06 ← | | |
| 6. <i>Rev.</i> to l., wreath; below,
☶ . 16.73 ← | <i>Reattrib.</i> p. 16,
56 | ca. 318–315 |
| 7. <i>Rev.</i> to l., shield; ⁵ below,
☶ . 17.01 ← | <i>Reattrib.</i> p. 16,
59 | ca. 318–315 |
| 8. <i>Rev.</i> to l., pyramid surmounted by
star above X; below, ☶ . 16.76 ↑ | | ca. 297–295 |

² Lifetime and early posthumous issues bear the inscription ΑΛΕΞΑΝΔΡΟΥ unless otherwise indicated. References are to the publications of E. T. Newell: *Demanhur—Alexander Hoards: Demanhur 1905*, ANSNNM 19 (New York, 1923); *Reattrib.* — *Reattribution of Certain Tetradrachms of Alexander the Great* (New York, 1912); *Sidon-Ake — The Dated Alexander Coinage of Sidon and Ake* (New Haven, 1916); *WSM — The Coinage of the Western Seleucid Mints* (New York, 1941).

³ Newell's mint attribution is maintained here despite doubts expressed by M. J. Price, who would give much of the coinage to Pella. See "The Coinage of Philip II," *NC* 1979, pp. 230–41, and "On Attributing Alexanders — Some Cautionary Tales," *Essays Thompson*, pp. 247–49.

⁴ The ☶ issues were not found in the Demanhur Hoard (buried ca. 318 B.C.) and are not accurately dated by Newell in *Reattrib.* A complementary series of posthumous Philips formed one of the latest elements in the Paeonia Hoard which Georges Le Rider dates shortly after 316/5 B.C. See *Le monnayage d'argent et d'or de Philippe II* (Paris, 1977), pp. 303–4, hereafter cited as *Philippe*.

⁵ Described by Newell as a kausia but more likely a shield seen from the side as on coins of Philip II (*Philippe*, pl. 46, 6 and 14).

Pella

9. *Rev.* to l., Boeotian shield. 17.01 ↑ ca. 315
 10. *Rev.* to l., symbol?; below, ca. 315
 Boeotian shield. 16.97 ↑
 11. *Rev.* to l., upright trident; ca. 314
 below, Α. 16.81 →

Aradus

12. *Rev.* ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ; Cf. WSM, ca. 315–301
 to l., anchor and ⲛⲣ; below, Γ. pl. 43, E
 16.85 ←

Sidon

13. *Rev.* to l., Σ; below, ΣΙ. *Sidon-Ake,* ca. 316/5
 17.02 ↑ p. 18, 50

Babylon

14. *Rev.* ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ; ca. 315–312⁶
 to., ΜΙ; below ⲛⲣ in wreath.
 16.91 ←

Uncertain⁷

15. *Rev.* to l., Μ (or Ⲙ); below, ca. 315–300
 Ⲙ. 17.13 →

DRACHMS

Amphipolis

16. *Rev.* to l., cock. 4.03 ↑ Cf. *Demanhur* ca. 328/7
 792

⁶ The date is that of Nancy Waggoner, based on her preliminary study of the coinage.

⁷ This and similar issues were in Newell's Cilician trays but there is nothing to indicate that he thought they belonged to Tarsus.

17. *Rev.* to l., Λ above torch; below, ca. 310–298
 ♠ . 4.19 (pl.) ←

Citium

18. *Rev.* ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ; Cf. *Demanhur* ca. 332–320
 to l., ⚡ . 4.08 ↑ 2546

Salamis

19. *Rev.* to l., bow. 4.07 ↑ Cf. *Demanhur* ca. 330–320
 2445

*Mylasa*⁸

20. *Rev.* to l., ☉ ; below, ΚΛ. ca. 314
 4.21 ↑
 21. *Rev.* to l., ☉ ; below, ΚΛ. 4.26 ↑ ca. 314
 22. *Rev.* to l., ☉ ; below, ΕΥ. ca. 314
 3.98 ↓
 23. As no. 22. 4.15 ←
 24. As no. 22. 4.14 ↑
 25. *Rev.* to l., ☉ ; below, ΚΗ. ca. 314
 4.22 ↑
 26. *Rev.* to l. statue of Artemis ca. 285–280
 Kindyas. 4.02 ↑

*Side*⁹

27. *Rev.* ΦΙΛΙΠΠΟΥ; below, Α. ca. 322–316
 4.23 →
 28. *Rev.* below, Α. 4.12 ↑ ca. 322–316

⁸ The attribution and dating are discussed by the author in "The Alexandrine Mint of Mylasa," *Numismatica e antichità classiche* 10 (1981), forthcoming.

⁹ Nos. 27–32 are illustrated on Plates 8–9 in connection with the commentary on Side, pp. 44–48.

29. *Obv.* of 28. *Rev.* below, 𐤀 . ca. 322–316
4.17 ↑
30. *Rev.* $\Phi\text{I}\Lambda\text{I}\Gamma\Gamma\text{OY}$; to l., pome- ca. 322–316
granate. 4.16 ↑
31. *Rev.* of 30. 4.15 ↑
32. *Rev.* no markings. 3.65 ↑ ca. 322–316

Babylon

33. *Rev.* to l., M; below, 𐤎 . Cf. *Demanhur* ca. 329–326
4.12 ↑ 4331
34. *Rev.* $\text{BA}\Sigma\text{I}\Lambda\text{E}\Sigma\text{ A}\Lambda\text{E}\Xi\text{AN}\Delta\text{POY}$; Cf. *Demanhur* ca. 323–320
to l., M; below, ΛY . 4.21 → 4479

Susa

35. *Rev.* $\Phi\text{I}\Lambda\text{I}\Gamma\Gamma\text{OY}$; below, ΛA . ca. 322–316
3.84 ←

Uncertain

36. *Rev.* no markings. 4.25 ↓
37. *Rev.* to l., $\Phi?$ 3.57 (pl.) ↑
38. *Rev.* to l., X . 3.96 ↑
39. *Rev.* $\Phi\text{I}\Lambda\text{I}\Gamma\Gamma\text{OY}$; to l., star;
below, ΦI . 4.20 ↑
40. *Rev.* to l., crescent; below, EY.
3.64 →
41. *Rev.* to l., E (or B). 4.15 ↑
42. *Rev.* to l., lion's head facing;
below, NI. 4.22 ↓
43. *Rev.* to l., aplustre. 4.33 ↑
44. As no. 43. 4.21 ↑
45. *Rev.* to l., amphora. 4.20 ↑
46. *Rev.* to l., Σ . 4.18 ↑

DEMETRIUS POLIORCETES¹⁰

TETRADRACHM

Amphipolis

47. *Rev.* to l., ⚡ ; to r., ⚡ . *Demetrius* 124 289/8
16.78 ↑

DRACHMS

Tarsus

48. *Rev.* to l., A; to r., ☉ . *Demetrius* 44 298–295
4.23 ↑
49. As no. 48. 4.22 ↑

LYSIMACHUS¹¹

TETRADRACHM

Amphipolis

50. *Rev.* to l., caduceus with handle; *Lysimachus* 193 288–281
to r., ⚡ . 17.03 ←

DRACHMS

Lysimachia

51. *Rev.* to l., lion's forepart, *Lysimachus* 7 299–296
above ⚡ ; below, Φ. 4.23 ↑

¹⁰ References are to E. T. Newell, *The Coinages of Demetrius Poliorceles* (London, 1927).

¹¹ Coins have Lysimachus' own types except for no. 51 which has the Alexander types and ΒΑΣΙΛΕΥΣ ΛΥΣΙΜΑΧΟΥ legend. References are to M. Thompson "The Mints of Lysimachus," *Essays Robinson*.

Ephesus

52. *Rev.* to l., bee between E and Φ. *Lysimachus* 168 294–287
4.22 ↑
53. As no. 52. 4.22 ↑
54. *Rev.* to l., ♂ ; on throne, ♀ . *Lysimachus* not. 294–287
4.03 ↑
55. *Rev.* to l., bow and quiver; on throne, A. 4.29 ↑ *Lysimachus* not. 294–287
56. *Rev.* to l., cithara; on throne, A. *Lysimachus* 174 294–287
4.18 ↓
57. As no. 56. 4.30 →

Uncertain

58. *Rev.* on throne, Λ . 4.26 ↑

SELEUCUS I

DRACHM

Seleucia on the Tigris

59. *Rev.* above, anchor and Α Θ. *ESM* 80¹² 289/8
4.17 ←

RHODES

DIDRACHM

60. *Rev.* to l., grapes and EY. ca. 300¹³
6.66 ↑

¹² E. T. Newell, *The Coinage of the Eastern Seleucid Mints* (New York, 1938).

¹³ The date is that of Denyse Bérend who is making a study of the coinage.

For the most part the 60 coins of the catalogue belong to series which have been published with mint attributions and dates. Some, however, require or merit further discussion. These include Alexanders of Amphipolis, Pella, Side and various uncertain mints as well as two issues of Lysimachus from Ephesus.

Amphipolis

Two drachms are welcome additions to the scanty record of small change from this Macedonian mint. No. 16 is to be associated with tetradrachms bearing the same cock symbol and dated by Newell to ca. 328/7 B.C., while no. 17 is a fraction related to the long series of Λ -torch tetradrachms of Cassander. The latter drachm is plated and of somewhat barbaric style. It is probably an imitation but the imitation implies an official issue.

Among the tetradrachms here assigned to Amphipolis, no. 8 is somewhat controversial. Originally ascribed by Müller to an uncertain mint in Macedonia, Thrace or Thessaly,¹⁴ the series was subsequently identified by Imhoof-Blumer as coming from Uranopolis¹⁵ and, although this attribution has been rejected by many numismatists, it tends to recur from time to time, even in recent catalogues.¹⁶ This may be an appropriate time and place to weigh its validity.

The basis for the attribution is, of course, the pyramid surmounted by a star, found on autonomous issues of Uranopolis, either as the head-dress of Aphrodite Urania or as a symbol in the field. Exactly the same device appears in the left field of no. 8 and other tetradrachms of Alexander type.

¹⁴ *Numismatique d'Alexandre le Grand* (Copenhagen, 1855), 641–45.

¹⁵ *Monnaies grecques* (Amsterdam, 1883), pp. 96–98.

¹⁶ For example, in the 1976 *SNG* of the Ashmolean Museum nos. 2657–58 are listed under the Uranopolis heading. On the other hand Newell, who was certainly familiar with Imhoof's article, placed his pyramid-star coins at the end of his Amphipolis trays, immediately preceded by issues with fulmen— Γ and those in turn by the Λ -torch series. Posthumous tetradrachms of Philip II with Λ -torch and fulmen— Γ comprise the bulk of Le Rider's Group IV at Amphipolis (*Philippe*, pp. 125–26) dated ca. 315/4 to ca. 295/4. There are no recorded Philips with pyramid-star symbol.

Four other factors, however, should be considered in relation to this coinage:

1. The pyramid-star which forms the dominant control of no. 8 is one of the numerous secondary controls of the extensive Λ -torch series (Plate 4, A and C).

2. Although there is considerable diversity among the obverses of the Λ -torch and pyramid-star issues, as one would expect in such a large coinage produced by various engravers, there are dies of the two issues so close in style as to be clearly the work of the same hand. Can one really suppose that nos. A and C on Plate 4 belong to one mint and nos. B and D to another?¹⁷

3. The pyramid-star emission is a truly substantial one. Newell recorded some 50 obverses used in its production. As the output of Amphipolis, this is not remarkable. As an isolated issue from a minor mint such as Uranopolis, its size is astonishing.

4. On tetradrachms of Uranopolis,¹⁸ the pyramid-star is merely a part of the goddess' headdress; the control mark is Λ -torch in the left field. It is only on some of the small silver of Uranopolis that the pyramid-star appears as a separate symbol.

To divide the pyramid-star Alexanders from those with Λ -torch is to disregard the stylistic evidence and the interlinking pattern of control marks. There is no more reason for ascribing the pyramid-star coins to Uranopolis than there is for giving the Λ -torch sequence to that city on the basis of the control mark on its large autonomous silver. Breitenstein recognized this in 1943 when he published the Macedonian section of the Copenhagen Cabinet,¹⁹ listing all Λ -torch and pyramid-star pieces under Uranopolis; this is certainly a more logical approach than subsequent attempts to divide the coinage between the two Macedonian mints. Yet few, if any, numismatists today would go so far as to

¹⁷ The four coins are in the ANS Cabinet: A. 16.94←, B. 17.14↑, C. 16.89↓, D. 17.07→

¹⁸ Two are known. One, an acquisition of the Berlin Cabinet, was published by J. Friedlaender (*ZfN* 1878, p. 2; pl. 1, 2). The other, from the Weber and Rhousopoulos Collections, is illustrated in Hirsch 21, Nov. 16, 1908, 1158, and Hirsch 13, May 15, 1905, 990.

¹⁹ *SNG* 697-708.

attribute the entire Λ -torch sequence²⁰ to an obscure town of late foundation with very little in the way of autonomous silver and bronze.

According to Athenaeus (3.98) Uranopolis was founded by Alexarchus, Cassander's brother, and this may be significant for the present discussion. Cassander's coinage of Alexanders at Amphipolis could only have begun after the death of Philip III. The comparatively small emissions with Λ -bucranium and Λ -T-torch are his early issues, followed by the extensive series with Λ -torch. These last coins are noteworthy for the repetition of the dominant control. From ca. 310 at the latest until ca. 298 every Alexander of Amphipolis has Λ -torch in the left field; the various secondary controls are inconspicuously positioned below the stool of Zeus.

This dominant control may be a form of "mintmark," as has been suggested, but it seems more probable that it had some personal connection with Cassander himself.²¹ If this is the case, there is nothing particularly surprising about its appearance on the coinage of Uranopolis. In adopting the distinctive device of his powerful brother, Alexarchus would merely be stressing the family relationship, perhaps acknowledging Cassander's help in the establishment of the new city. The use of the pyramid-star as a secondary control on Cassander's money, again linking the two coinages, need imply nothing more than a moneyer at Amphipolis who came from Uranopolis or who played a role in its foundation.

After Cassander's death in 298 the mint of Amphipolis continued to operate under his two sons. At least two major emissions appeared: one with fulmen- Γ as the dominant control and another with pyramid-star, presumably supervised by the man who had served as one of Cassander's

²⁰ Some idea of its size is indicated by Newell's record. On his tickets he identifies some 1,350 obverse dies for the coinage of Amphipolis from 336 B.C. through the pyramid-star issue. Of these, roughly 400 are connected with the Λ -torch strikings. The numerous secondary controls employed in the series are outlined by C. Ehrhardt, "A Catalogue of Issues of Tetradrachms from Amphipolis, 318-294 B.C.," *Journal of Numismatic Fine Arts*, vol. 4, no. 4 (1976), pp. 85-89.

²¹ Although the race-torch was a common reverse type on earlier autonomous coins of Amphipolis, the *lambda* makes no sense as an addition to a civic symbol. Also one notes that the Λ -torch device is restricted to the reign of Cassander. After his death it disappears from the coinage.

moneyers some years earlier. These seem to have been the last Alexanders struck at Amphipolis prior to Demetrius Poliorcetes' conquest of Macedonia in 294 B.C.

In the foregoing discussion references to the autonomous tetradrachms of Uranopolis assume that they are genuine, but this is not certain. Both were condemned by Gaebler and Lederer in 1931 as modern forgeries.²² Breitenstein²³ on the other hand argued for their authenticity, contending that Lederer's stylistic objections were not convincing and that his chief reason for rejecting the coins, namely their low weight, was not valid since late posthumous Philips do fall well below the established norm. As an example he cited a tetradrachm in Copenhagen weighing only 13.84 grams. Considerably more evidence in support of Breitenstein's argument is now available with the publication of Le Rider's monumental study of the coinage of Philip II. While earlier issues down to ca. 315 B.C. adhere fairly well to a standard of about 14.50, the latest strikings are much lighter. Of 38 specimens of the Λ -torch sequence of Philips, 12 are below 14 grams (13.99–12.98); of nine specimens of the final fulmen-I issue, five are below 14 (13.98–13.44).²⁴ There is nothing inherently implausible about the weight of the Uranopolis tetradrachms (13.50 and 13.70), which would have been roughly contemporary with the latest Philips.

Actually Lederer expressed basic concern over the discrepancy between the weight standard of the tetradrachms and that of the fractional currency, which he regarded as genuine. This concern is entirely justified, but it is the weight of the fractions that presents the real problem. It is difficult to believe that at this time, ca. 300 B.C., a Macedonian town would have used any standard other than that of Alexander or of Philip. Yet the five known didrachms weigh 7.80, 7.77, 7.74, 7.60, and 6.93. Only the last is compatible with a tetradrachm of "Thraco-Macedonian" standard; the others are far too heavy. Their doubles would range from 15.60 to 15.20 grams. Even the lighter of the

²² P. Lederer, "Symbole der Aphrodite Urania," *ZfN* 1931, pp. 47–53.

²³ N. Breitenstein, "Studies in the Coinages of the Macedonian Kings," *Acta Archaeologica* 13 (1942), pp. 248–50.

²⁴ *Philippe*, p. 353.

two drachms cited by Lederer (3.87 and 3.66) would indicate a tetradrachm of at least 14.64 grams, heavier than any Philip of any period.

Clearly the autonomous coinage of Uranopolis merits further study to resolve the problems and determine to what extent the civic silver, large and small, is beyond suspicion. This is not, however, a crucial factor in the present discussion. If the tetradrachms are false, the Λ -torch connection with Cassander's money disappears, but the remaining evidence seems to me sufficiently strong to cast grave doubts on the Uranopolis attribution for the pyramid-star Alexanders.

Pella

Nos. 9–11 were not represented in the Demanhur Hoard. Post-humous Philips with the Boeotian shield device form the last emission of Le Rider's Group III at Pella and are dated ca. 315 B.C.²⁵ There are no Philips with trident-A; Alexanders with this control were placed immediately after the shield issue in Newell's trays.

Side

Among the minor issues of the Sinan Pascha Hoard (buried ca. 317/6 B.C.) are two series, each represented by four drachms, which are ostensibly discrete but can be linked as the output of a single mint. The one series, distinguished throughout by a pomegranate symbol in the left field, has universally been attributed to Side. The other has no symbol in the field; all reverses are marked with the letter A above or below the strut of Zeus' stool. Both series belong to the time of Philip III and hence were struck during a relatively few years after the death of Alexander. In the Sinan Hoard the four coins with A seem somewhat more worn than those with pomegranate but obviously there cannot be any substantial interval between the two emissions.

In Newell's trays, tetradrachms assigned to Phaselis or Side end with the issues of the Demanhur Hoard, buried ca. 318. The few pomegranate drachms which Newell possessed were placed after his Phaselis-Side tetradrachms and then, at some remove, the drachms with A as though Newell thought they came from the same region but not necessarily the same mint.

²⁵ *Philippe*, p. 398.

Bringing together the relevant material from three hoards at the ANS (Sinan Pascha, Cavalla and Armenak) as well as the coins and casts of the general collection has produced a number of die links including a crucial one between A and pomegranate coins. The sequence of striking seems to have been as follows:²⁶

ΑΛΕΞΑΝΔΡΟΥ

ΦΙΛΙΠΠΟΥ

*A below*²⁷

- | | |
|---------------------------------|-------------------------------------|
| 1a. Sinan, 4.01 ↑ | 1b. Athens |
| 2a. Sinan, 4.08 ↑ | 2c. Turin, 4.01 |
| b. Sinan, 4.38 ↑ | |
| 3. Commerce (IGCH 1444), 4.23 ↓ | 4. Cambridge (McClean 3540), 4.33 ↑ |
| 5a. Cavalla 28 | 6. Cavalla 27 |
| 7a. Armenak, 4.37 ↑ | |

Α below

- | | |
|----------------|---|
| 5b. Cavalla 29 | 8. Pomegranate in l. field. ANS, 4.01 ↑ |
|----------------|---|

Pomegranate l.; ΠΥ below

- | | |
|------------------------------|-------------------|
| 7b. Athens (IGCH 187), 4.12 | 10. Sinan, 4.27 ↑ |
| 9. Rev. of 7b. Sinan, 4.15 ↑ | |

Pomegranate l.; Λ below

- | |
|--------------------------------|
| 11. Sinan, 4.30 ↑ |
| 12. Rev. of 11. The Hague |
| 13a. Rev. of 11. Sinan, 4.26 ↑ |

²⁶ In the outline the Arabic numbers indicate individual obverse dies and the letters various reverses associated with each obverse. It should be stressed that this is only a skeleton record but it does, I believe, include examples of all issues.

²⁷ Placement of the A, above or below the strut, apparently has no significance. Nos. 1a and 1b, from the same obverse die, have different positions as do nos. 2a and 2b.

Pomegranate l.

- 13b. Cavalla 30
 14. *Rev.* of 13b. Cavalla 31
 15. ANS, 4.14 ↑
 16a. No pomegranate. Cavalla 32. 16b. ANS, 4.19 ↑

A full corpus of the coinage might provide more links but even this incomplete record unites the issues in satisfactory fashion. Side's initial output of tetradrachms²⁸ and a few associated drachms seems to have come to an end shortly after Alexander's death. During the joint reign of the young Alexander and Philip III two series of drachms appear: one, like the earlier tetradrachms, with no indication of mint and the other with pomegranate symbol and secondary controls. In one respect the sequence for this second series is somewhat surprising in that one would expect the pomegranate alone to come first, followed by the more elaborate double controls, but the pattern of die linkage makes this impossible. The last issue is unusual, too, in that the same obverse die is used for a Philip coin with pomegranate and one of Alexander without marking. Possibly the symbol was inadvertently omitted; possibly its absence and the lack of secondary controls indicate a certain confusion in a mint winding down its operations.

Accompanying the pomegranate drachms is a rare tetradrachm issue, known to me from only two examples sharing the same pair of dies.²⁹ The striking is in the name of Philip and is marked by a pomegranate in the left field. Presumably it belongs with the final issue of drachms but this is not certain. There is also a rare gold issue with two examples recorded and again from a single pair of dies.³⁰ This is in the name of

²⁸ *Demanhur* 1819–1973 attributed to Phaselis or Side. In his discussion (pp. 101–2) Newell makes it clear that he favors the latter mint and indeed the tickets of his associated gold, much of it acquired after the publication of *Demanhur*, are unequivocally labelled SIDE.

²⁹ One coin (Plate 9, E) is from the collection of Charles Hersh and weighs 17.20 g. A die duplicate once owned by Henri Seyrig is illustrated by S. Atlan, "Die in Side geprägten Münzen mit Alexandertypen," *Bellelen*, vol. 31, no. 124 (1967), pl. 1, 6.

³⁰ The example on Plate 9, F is ANS ex Newell, 8.62 ↑. It is illustrated by Atlan as is another piece from the Hunter Cabinet (*Bellelen*, pl. 1, 2–3).

Alexander and can be linked with a specific issue of drachms; both gold and silver bear the Φ monogram.

In a recent article Martin Price³¹ maintains that the coinage which Newell assigned to either Phaselis or Side, with a clearly expressed preference for the latter mint, is unlikely to be Sidetan since that mint is already provided with pomegranate issues and since there are obvious differences of style and format between the pomegranate coins and the Demanhur tetradrachms of Phaselis-Side. This is quite true but the differences seem to me a matter of chronology rather than provenance.

In the beginning Side, like the great majority of Alexander's mints, issued coinage without indication of the place of origin. Until a mint study has been made there is no way of telling how long this initial tetradrachm series lasted. Newell thought it began ca. 326. There are not many issues involved and the series may have stopped almost immediately after Alexander's death. Of the 154 Demanhur coins, there is only one with the name of Philip; this is more likely to belong to the beginning rather than the end of the joint reign. As Price notes, all these coins are inscribed with the king's title as well as his name and the reverses show a Zeus figure with legs parallel.

Next, in my judgment, come the issues in gold and silver, which must be dated ca. 322–316 B.C. The drachm series starts without indication of mint but soon the civic emblem of the pomegranate is added to the coinage, appearing on gold and on large and small silver. None of these coins has the royal title and the Zeus of the reverses is consistently depicted with legs crossed.³²

At few mints, however, is there a clear-cut pattern of consistency in the use of the royal title or in the representations of Zeus and Nike. At Amphipolis, for example, the tetradrachm coinage is first struck with

³¹ *Essays Thompson*, pp. 249–50. With regard to the mint attribution, it is impossible to follow the Ashmolean *SNG* (2842–60) in giving this series to Sardes, especially when no. 2860 shares an obverse die with a tetradrachm of Philip III (no. 3201) assigned to Pamphylia. One assumes that a mint heading has been lost in publication and that this highly misleading attribution will soon be corrected.

³² Despite the basic differences that Price cites, it is worth pointing out that a drachm of the Phaselis-Side series (Plate 9, G; ANS, 4.03←) has no ΒΑΣΙΛΕΥΣ although associated tetradrachms with the same $\Phi\text{I}-\Lambda\text{Σ}$ controls are so inscribed (Plate 9, H; ANS, 17.17←).

ΑΛΕΞΑΝΔΡΟΥ, followed by issues with ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ then by a long series with the name of Alexander alone. At Sardes *within the same issue* there are staters with and without ΒΑΣΙΛΕΩΣ sharing an obverse die, staters showing Nike in stiff static pose and Nike advancing, drachms representing Zeus with both parallel and crossed legs. In fact, the last Alexander-type emissions of Sardes, shortly before and under Lysimachus, have examples of the stiff Nike and the Zeus with parallel legs, normally associated with a much earlier period.³³ The form and format of a particular coinage seems, often enough, to have been a matter of the die cutter's preference rather than established mint policy.

It all makes a perfectly reasonable sequence from a single mint. For the most part the Demanhur tetradrachms would be the issues of Alexander's lifetime, followed after perhaps a short interval by less extensive emissions, chiefly drachms, during the joint reign. After Philip's death there is very little Alexander-type coinage from Side and what there is lies outside the scope of the present discussion.³⁴

Uncertain

Very little can be said about this group of unattributed striking. No. 42 is from the same obverse die as a coin in the Armenak Hoard with facing lion's head to left and barleycorn below the stool. Newell's ticket for the latter reads "Cardia?". The aplustre issue (nos. 43–44) and that with amphora to left (no. 45) are almost identical in obverse style and certainly from the same mint. Newell seems to have thought that they originated in mainland Greece, possibly Euboea. Sinope, where the aplustre was a common symbol on both autonomous and Alexandrine

³³ For Amphipolis, see *Demanhur* 1–1582; the last hoard issues have the title but the ⲡ striking which immediately follow those with Ⲛ have only the name of Alexander. The Sardes material is illustrated in the writer's forthcoming volume on the Alexander mints of Miletus and Sardes.

³⁴ This includes the Paris stater with pomegranate in left field and the Glasgow tetradrachm with pomegranate below the stool, illustrated by Atlan (above, n. 29, pl. 1, 1 and 4). Both may have been struck after 316. The issue with pomegranate and ΑΦ (Atlan, pl. 2, 22) is certainly of the third century.

issues, is also a possibility although no more than that.³⁵ No. 39 with star and ΦΙ, struck in the name of Philip III and present in the Sinan Pascha Hoard, must antedate 317/6 B.C.

Ephesus

No. 55 is merely a variant of *Lysimachus* 171–72, both with bow and quiver in the left field but with no marking or a monogram on the throne. Although no. 54 has no obvious connection with Ephesus in that it lacks the standard Ephesian symbols, its monogram on the throne is very distinctive and identical with that found on drachms with Ε Φ and bee in the left field (*Lysimachus* 169).

If the Cavalla Hoard as recorded here is an intact find, it contains nothing which points to a burial date later than Corupedium. Certainly the comparative dearth of third-century material is noteworthy and this might suggest that some of the best-preserved coins, especially tetradrachms, were abstracted before the remainder of the deposit was put on the market. Nevertheless the wear on the coins that we have of Lysimachus, Demetrius and Seleucus seems entirely compatible with interment ca. 280 B.C.

³⁵ If the coinage does belong to Sinope, it must precede the third-century issues which Newell gives to that mint in *The Alexandrine Coinage of Sinope* (New York, 1919).

A THIRD-CENTURY B.C. HOARD FROM THESSALY AT THE ANS (*IGCH* 168)

(PLATES 10–16)

THOMAS R. MARTIN

In 1938 and 1939 E. T. Newell acquired the coins now at the ANS which make up the bulk of *IGCH* 168. This hoard provides crucial evidence for the poorly documented chronology of the fourth-century B.C. silver coinage of Pelasgian Larissa in Thessaly and, therefore, for the history of Thessaly at the beginning of the period of Macedonian dominance over the region. The publication of the ANS material from this hoard is intended to make plain the nature of this evidence.¹

The ANS coins of *IGCH* 168 did not all come into Newell's possession at the same time, as his notes in the files of the Society show. From a source in Athens, Newell acquired in 1938 a first batch of 529 coins said to have been found "in a little village near Larissa." This group consisted of 155 drachms of Larissa, 72 tetradrachms of Athens, 1 tetradrachm and 248 drachms of Alexander III, 25 drachms of Philip III, 3 tetradrachms of Demetrius Poliorcetes, 9 tetradrachms of Lysimachus, 15 drachms of Lysimachus, and 1 tetradrachm of Eumenes I. Newell subsequently received from the same source 8 tetradrachms of Lysimachus and 7 tetradrachms of Antigonus Gonatas. These coins were said to be from the same hoard as the first group although they were channeled for sale

¹ My discussion does not include the 21 coins acquired by the Athens museum in 1938 which have been connected with this hoard. See the note to *IGCH* 168 with reference to P. Lemerle, "Chronique des fouilles et découverts archeologiques en Grèce en 1938," *BCH* 62 (1938), p. 446 (Volos).

I intend to follow up my work on *IGCH* 168 with an article which will present the outline of a revised chronology for the fourth century B.C. silver coinage of Larissa.

through a source in Volos. At the end of 1938 Newell bought from an English source 15 tetradrachms of Demetrius Poliorcetes which he regarded as "obviously from the same hoard." He was careful to record that all the coins in these three parcels had an identical appearance before cleaning, covered as they were "with the same curious, light greyish-tan, rather hard patches of dirt and small areas of purple corrosion." Newell's conclusion, reasonably enough, was that "there is no doubt but that these coins came from the same hoard."

The final addition to Newell's holdings from *IGCH* 168 consisted of 12 tetradrachms of Lysimachus which came from another English source in early 1939. Although the source stated that these coins had come from a hoard found near Nicomedia, Newell believed that "almost certainly they formed part" of *IGCH* 168. Unfortunately, Newell did not explain in his notes the reasons for this conclusion, but one suspects that his knowledge of the contemporary trade in ancient coins was such that his judgement on this point should be respected. Fortunately for our purposes, none of the coins from this final group figure in the determination of the probable burial date of the hoard. Although Newell in his notes did not indicate to which of his purchases in 1938 the various tetradrachms of Lysimachus and of Demetrius Poliorcetes belonged, he did list these 12 coins separately. They are identified in the catalogue by (N) after their catalogue number.

As is often the case with hoards sold on the market, the original hoard was probably different in size and composition from the hoard which eventually appeared in trade. In a letter written from Greece on March 25, 1938, a copy of which is on file at the ANS, W. Schwabacher reported that he had seen somewhat less than 300 coins from a hoard reputed to be perhaps as large as 800 pieces which had been unearthed in January 1938, "bei Larissa." The reported date and location of the find complement Schwabacher's brief survey of the pieces he examined to make it certain that he had seen part of the same group of coins of which Newell ultimately acquired 571 (counting the "Nicomedia" pieces),² the coins which became known as *IGCH* 168. Schwabacher wrote that he had seen

² Not 570, as recorded in *IGCH*. The number of tetradrachms of Lysimachus is 29 rather than 28.

about 100 "very worn" drachms of Larissa,³ about 170 drachms of Alexander, 3 posthumous tetradrachms of Alexander, 10 tetradrachms of Lysimachus, and 2 tetradrachms of Demetrius Poliorcetes, one of which was of the portrait of Demetrius/Poseidon type and one of the Nike on prow/Poseidon type, the latter in "mint state." And, he added, there was one tetradrachm in "mint state" of the Aetolian League, a coin not acquired by Newell which presents a difficulty in chronology to which I shall return.

In any case, that Schwabacher saw soon after discovery this large number of drachms of Larissa together with other Macedonian regnal issues serves to confirm Newell's judgement based on the patina that the coins he acquired did indeed constitute a hoard. Newell realized that he had obviously not acquired all the coins from this hoard, especially not all the tetradrachms of Alexander, of which he had only one. Schwabacher had seen three, and when in 1940 Newell heard that there was a large parcel of such coins from a hoard for sale in Athens, he observed in his notes that these were "obviously the missing tetradrachms of this type, for it is unthinkable that such a hoard would have contained but one Alexander tetradrachm."

In conclusion, we can assume with reasonable confidence that, with the possible exception of the "Nicomedia" tetradrachms of Lysimachus, the coins in ANS which make up *IGCH* 168 were part of the same hoard despite the rather complicated circumstances under which they entered the Society's collection. But a large number of coins from the original hoard are probably missing, most if not all tetradrachms of Alexander. There is no reason to doubt the accuracy or the reported location of the discovery of the hoard. Furthermore, the presence of a large number of drachms of Larissa makes the vicinity of this city a very probable area for the origin of the hoard because these drachms tended not to travel far from home in large numbers, as the contents of the hoards recorded in *IGCH* show.

³ Since such large finds of Thessalian coins are rare, the congruence of this information with Newell's acquisition of over 100 drachms of Larissa helps to insure the identification of these coins as one and the same group.

COMPOSITION

From the hoards listed in *IGCH* and *Coin Hoards* 1–3, we find for purposes of comparison with *IGCH* 168 three other hoards from Thessaly of approximately the same burial date (roughly the middle quarters of the third century): *IGCH* 159, *IGCH* 162, and *Coin Hoards* 3, no. 43 (= 2, no. 72). These hoards resemble *IGCH* 168 in overall composition, that is, they all contain issues of various fourth- and third-century kings, Greek coins from outside Thessaly, and local coins of Thessaly. There are, however, differences in detail.

In contrast to *IGCH* 168 and *Coin Hoards* 3, no. 43, which contain only silver, both *IGCH* 159 and 162 include a few bronze coins along with the silver issues which constitute their bulk. The inclusion of bronze small denominations is reason to believe that these hoards are circulation hoards, but the lack of bronze does not prove that the other two hoards are savings hoards. Indeed, the significant degree of wear exhibited by the majority of the coins in *IGCH* 168 (and in *Coin Hoards* 3, no. 43, to judge from the published photographs) should mean that these coins also form a circulation hoard, although one cannot of course rule out the possibility that a savings cache was combined with coins from contemporary circulation to make up the actual group of coins hidden away and never recovered in antiquity.

The occurrence of regnal issues in the four hoards is not absolutely consistent, but there is perhaps a discernible pattern. There are specimens of the coinage of Philip II in *IGCH* 162 and *Coin Hoards* 3, no. 43, but not in the other two hoards. Similarly, Philip III and Demetrius Poliorcetes are represented only in *IGCH* 159 and 168. Antigonus Gonatas' issues are found in all the hoards except *Coin Hoards* 3, no. 43. The coins of Alexander III and of Lysimachus appear in all four hoards. The remaining regnal coins are unique to each hoard: Seleucus I and Antiochus I only in *IGCH* 159; Antiochus II only in *IGCH* 162; Eumenes I only in *IGCH* 168; and Ptolemy II only in *Coin Hoards* 3, no. 43.

Chronological considerations obviously help to explain the pattern of distribution, such as it is, but other factors are also relevant. As far as chronology is concerned, it is not surprising that the no longer contemporary coinages of Philip II, Philip III and Demetrius Poliorcetes are

missing from some of the hoards. By the same token, the presence of Antigonus' contemporary coins in three of these roughly mid-third century hoards seems quite natural, as does the presence of Lysimachi, which continued to be produced in this period even after Lysimachus' death. On the other hand, that the coins of Alexander III turn up in all four hoards is testimony to the enormous numbers in which these issues were originally produced and continued to circulate in the third century. Finally, geography perhaps accounts in part for the inconsistent distribution of Seleucid, Pergamene, and Ptolemaic issues. Coins from more distant areas no doubt made their way to Thessaly in sporadic fashion and only in small numbers in this period. There was no longer a link between Thessaly and the East as there had been when Thessalians served in the army of Alexander. It would be unwise to draw any conclusions about the nature of the composition of *IGCH* 168 based on the presence or absence of these three latter regnal coinages because they are so sparsely represented in the hoards of the period in Thessaly.

In the case of Greek silver coins from outside Thessaly, *IGCH* 168 looks rather different from the other hoards under review. *IGCH* 168 contains only coins of Athens in contrast to the variety of non-Thessalian Greek coinages found in the other three hoards. *IGCH* 162 has four different types, while *IGCH* 158 and *Coin Hoards* 3, no. 43, both have seven varieties. Moreover, there is a pattern to the occurrence of some of these coinages that is significant for an evaluation of *IGCH* 168. First, one notices that coinages from neighboring areas are well represented. Locrian and Histiaeian coins occur in both *IGCH* 159 and *Coin Hoards* 3, no. 43, and coins from Boeotia appear in all three hoards. But in addition to issues which probably came to Thessaly in regional trade, coins of Athens and of Sicyon also appear in these three hoards. The explanation of their presence is perhaps that these were well-known coinages that made their way to Thessaly in the process of international circulation, Sicyonian staters because they were conveniently on the same standard as that in use in Thessaly (the so-called Aeginetan standard), Athenian tetradrachms because they provided a trustworthy large denomination which, despite its different standard, served a useful purpose in an area where local mints only rarely issued any denomination larger than the drachm or perhaps the stater. In any case, one cannot fail to notice that *IGCH* 168 includes neither any specimens of neighboring coinages, with

the absence of coins from Boeotia especially conspicuous, nor any coins from Sicyon. This contrast with the composition of the other contemporary Thessalian hoards suggests that *IGCH* 168 as we know it may be incomplete, an observation which complements Newell's belief that a number of Alexander tetradrachms had been removed from the original hoard.

Finally, it can be pointed out that *IGCH* 168 is quite normal for a Thessalian hoard in containing only one kind of Thessalian coinage, and that kind Larissan. Of the 21 hoards of the fourth and third centuries from Thessaly which are listed in *IGCH* and *Coin Hoards* 1-3, 17 have coinage from only one Thessalian mint, and in 13 of these 17 the coinage is that of Larissa. In all, coins of Larissa occur in 17 of these 21 hoards. So far as one can tell from the recorded places of discovery (which are often not precisely known), this predominance is not the result of finding many more hoards from the environs of Larissa than from anywhere else in Thessaly. Furthermore, the same pattern holds in hoards found outside Thessaly. Again relying on *IGCH* and *Coin Hoards* as sources, one finds 12 hoards from the same period which were discovered in various areas of Greece and contained silver coins from Thessaly. *IGCH* 182 has one triobol of Pharsalus and *IGCH* 195 has one triobol of the perioikic Aenianes, but the remaining 10 hoards have only drachms, or in one case a stater, of Larissa as their only Thessalian pieces. This overwhelming predominance seems to indicate that the mint of Larissa simply outproduced all other Thessalian mints to such an extent that the coinage of Larissa became almost a national coinage in Thessaly, at least in its extent of circulation. Why and how Larissa was able to do this remains a mystery. However, it is at least conceivable that the situation is not solely the result of mint production on a large scale. For example, it is obvious that coins of Larissa were the only Thessalian issues to achieve any currency worth mentioning in international circulation. Whatever the reason for that status, once it became known in Thessaly that the coinage of Larissa was the most widely recognized Thessalian coinage for more than local transactions, it would have made sense to prefer coins of Larissa for hoarding purposes over a period of time in a savings cache or in the formation of a hoard composed of coins taken from contemporary circulation on a single occasion. If the coins of Larissa had a better chance than did other Thessalian coinages

for a favorable exchange in more distant markets or in transactions with foreign traders in Thessaly, that advantage would have made them especially worth hoarding.

CATALOGUE

The states of wear are indicated as Worn (W), Good (G), Very Good (VG), Fine (F), Very Fine (VF) and Fleur de Coin (FDC). An asterisk before the catalogue number indicates that this coin or, in the cases of Larissa and Athens, a representative sample of the sub-group is illustrated in the plates. The letter c before the number means that the ANS has only a cast of the piece indicated.

LARISSA

These 155 silver drachms are all of the same type. The female head on the obverse recalls the well-known Syracusan Arethusa and probably represents the eponymous nymph Larissa, daughter of Pelasgus.⁴ The horse on the reverse is of course a very apt and common motif on Thessalian coinage. The weights of the coins, almost all of which show signs of considerable wear (mostly W, some G), range from 5.46 to 6.09 grams, as shown in the table, pp. 74–75. The coins were struck to the so-called Aeginetan standard which was in general use throughout Thessaly as well as in neighboring Phocis and Boeotia. The great majority have a die alignment of ↑ or ↓. The general period of issue of these coins is the second half of the fourth century B.C. See the discussion below for further details.

A catalogue description of individual pieces is unnecessary because the type is identical for all, but the coins can be separated into the following five sub-groups of the type on the basis of slightly different features on the reverse.

⁴ The identification of Arethusa as a model was made long ago. See A. J. Evans, "Syracusan 'Medallions' and Their Engravers, in the Light of Recent Finds," *NC* 1891, p. 278, and F. Hermann, "Die Silbermünzen von Larisa in Thessalien," *ZNum* 1925, p. 49. For Larissa as the daughter of Pelasgus, see Hellanicus, *Die Fragmente der griechischen Historiker*, ed. F. Jacoby (Leiden, 1957), no. 4, F91, and Pausanias, 2.24.1.

Group 1

- *1–14. *Obv.*: Female head three-quarter facing l., wearing headband and necklace, the whole surrounded by circle of dots.
Rev.: ΛΑΡΙΣ above, ΑΙΩΝ below. Horse grazing r. with l. foreleg raised so hoof points at belly; below, small plant.

Group 2

- *15–18. *Obv.*: As group 1.
Rev.: As group 1 but below, trident.

Group 3

- *19–29. *Obv.*: As group 1.
Rev.: ΣΑΙΩΝ above, ΛΑΡΙ below. As group 1 but no symbol.

Group 4

- *30–57. *Obv.*: As group 1.
Rev.: Inscription as group 1. Horse's l. foreleg is positioned slightly to rear of r. foreleg and rests on groundline or only slightly above (a shared obverse die shows that these two varieties belong together); no symbol.

Group 5

- *58–155. *Obv.*: As group 1.
Rev.: As group 4 but with l. foreleg raised well off groundline.

ATHENS

These 72 old style silver tetradrachms belong to the fourth and third centuries to judge from the profile eye⁵ and the uniform die alignment be-

⁵ E. T. Newell, *A Hoard from Siphnos*, ANSNNM 64 (1934), p. 11, n. 15, and E. S. G. Robinson, "Coins from the Excavations at Al-Mina (1936)," *NC* 1937, pp. 188–89, demonstrated that the change from the facing eye to profile eye must have taken place near the beginning of the fourth century. J. N. Svoronos, *Les monnaies d'Athènes* (Munich, 1923–26), (hereafter cited as Svor.), pl. 19–20, and *Corolla Numismatica* (London, 1906), pp. 285–95, apparently placed the change in the middle of the fourth century. The Athenian imitation with profile eye from the Cabul hoard, buried ca. 380 B.C. (*IGCH* 1830), seems to confirm the view of Newell and Robinson.

tween ↙ and ←.⁶ The weights range from 16.70 to 17.18 grams, as shown in the table, pp. 71–72. Most of the coins show signs of wear (W to F).

Again, individual catalogue descriptions are unnecessary because all these coins are one type. However, they can be divided into sub-groups based on differences in the detail of the ornamentation of Athena's helmet. The earlier Athenian tetradrachms with facing eye have some sort of floral ornament curling up at the back of the helmet.⁷ On the later coins with profile eye this flower degenerates into a more abstract design.⁸ This design has been described as a capital T between reversed brackets or as the Greek letter pi with a central vertical tongue.⁹ Finally, the last issue of the old style tetradrachms, the coins with symbols on the reverse which apparently represent a transitional stage between the old and the new styles of Athenian coinage, have a very elongated ornament which curls forward to the front of the helmet.¹⁰ Therefore, it seems reasonable to assume that the ornament progressively changed from a compact flower at the rear of the helmet to an ever-broadening design which culminated in the arrangement seen on the transitional issues.¹¹

The most elaborate attempt to arrange the various permutations of this decorative motif in a relative chronological scheme is that of Jean Bingen based on his study of a hoard from Thorikos in Attica which included 282 old style Athenian tetradrachms of the profile-eye type.¹² Bingen distinguishes five varieties of so-called pi-type helmet ornament, all of which, according to his argument, antedate the style in which an ornament composed of four tendrils replaces the pi with tongue. This last

⁶ See E. S. G. Robinson, "The Tell El-Mashkuta Hoard of Athenian Tetradrachms," *NC* 1947, pp. 117–18. My survey of all the fourth- and third-century old style Athenian tetradrachms in the ANS collection confirms Robinson's observations based on the British Museum collection.

⁷ See, for example, *Svor.*, pls. 13, 14.

⁸ See, for example, *Svor.*, pls. 19, 20.

⁹ M. Thompson, "A Hoard of Athenian Fractions," *ANSMN* 7 (1957), p. 6; J. Bingen, "Le trésor monétaire Thorikos 1969," *Thorikos 1969*, 6 (Brussels, 1973), pp. 11–15.

¹⁰ See, for example *Svor.*, pl. 23, 21–23.

¹¹ See O. H. Dodson and W. P. Wallace, "The Kozani Hoard of 1955," *ANSMN* 11 (1964), p. 27, especially the diagram presented there.

¹² Bingen (above, n. 9), pp. 10–15

style he calls *quadridigitée* (hereafter QD).¹³ John H. Kroll has kindly informed me that he has identified yet another sub-category of ornament which he calls "heterogeneous" and proposes to date later than the QD style.¹⁴ The chronological implications of these sub-categories are discussed below. No "heterogeneous" types appear in this hoard, but there are examples of Bingen's pi types nos. 3, 4, and 5, examples of the QD type, and, finally, examples whose helmet ornament cannot be identified because of wear or misaligned flans on which no ornament was struck. The catalogue groups correspond to these five divisions.

Group 1

- *156-161. *Obv.*: Helmeted head of Athena r.; helmet ornament elongated but compact (Bingen, class pi 3).
Rev.: AΘE Owl r.; to l., crescent and olive branch.

Group 2

- *162-189. *Obv.*: As group 1 but with longer central tongue on pi ornament (Bingen, class pi 4).
Rev.: As group 1.

Group 3

- *190-196. *Obv.*: As group 1 but with more widely spaced pi ornament, often with long central tongue (Bingen, class pi 5).
Rev.: As group 1.

Group 4

- *197-211. *Obv.*: As group 1 but with QD ornament (Bingen, class *quadridigitée*).
Rev.: As group 1.

Unclassified

- *212-227. *Obv.*: As group 1 but ornament cannot be identified.
Rev.: As group 1.

¹³ See the schematic drawings in Bingen's fig. 7 (above, n. 9).

¹⁴ Professor Kroll will publish his findings in a forthcoming article on third-century Athenian silver coinage (*ANSMN* 27). For examples of the "heterogeneous" type, see Svor., pl. 23, 1-11.

ALEXANDER III

Obv.: Head of Heracles r.

Rev.: ΑΛΕΞΑΝΔΡΟΥ Zeus enthroned l., holding eagle and scepter.

*228. ↑ 17.05. Tetradrachm. *Rev.* to l., ⸱⸱. Uncertain mint.

ALEXANDER-TYPE DRACHMS

The hoard includes 288 drachms of the standard Alexander type, carrying the names of Alexander, Philip III and Lysimachus. Of these, 266 were produced at seven Asia Minor Mints, which are being published by Margaret Thompson.¹⁵ Since her studies will include this material with details of the individual issues, it will suffice here to summarize the strikings, nos. 229–494, by mint: Lampsacus, 62; Colophon, 91; Abydos, 45; Magnesia, 34; Sardes, 22; Teos, 4; Miletus, 8.

Almost all the drachms belong to the last quarter of the fourth century B.C. Fifteen bear the emblem of Lysimachus (the forepart of a lion), and nine were issued in his name, bringing the chronology down to ca. 297 B.C. Two drachms from Miletus are slightly later (Plate 13, C, D). They form part of the autonomous issue, with Μ monogram, which is die linked to the last emission of Demetrius Poliorcetes at Miletus and therefore to be dated ca. 294–290 B.C.¹⁶ The condition of the majority of these coins is W or G.

Only 7 of the 22 drachms not included in Thompson's studies (and therefore described below) can be firmly identified (nos. 495 and 504–7 of Alexander, and 568–69 of Lysimachus).

Obv.: Head of Heracles r.

Rev.: ΑΛΕΞΑΝΔΡΟΥ Zeus enthroned l., holding eagle and scepter.

*495. ↑ 4.15 (W) *Rev.* to l., bow. Salamis.

*496. ↗ 4.20 (G) *Rev.* to l., aplustre r. Uncertain mint.

¹⁵ The first of these volumes, dealing with Miletus and Sardes, is now in press; subsequent studies will be devoted to Lampsacus and Abydos and to the Ionian mints of Colophon, Magnesia and Teos.

¹⁶ E. T. Newell, *The Coinages of Demetrius Poliorcetes* (London, 1927), pp. 59–63.

- *497. ↑ 4.23 (G) *Rev.* as 496. Uncertain mint.
- *498. ↑ 4.11 (W) *Rev.* as 496. Uncertain mint.
- *499. ↑ 4.22 (VG) *Rev.* as 496. Uncertain mint.
- *500. ↑ 4.08 (VG) *Rev.* to l., aplustre l. Uncertain mint.
- *501. ↑ 4.21 (VG) *Obv.* of 500; *rev.* as 500. Uncertain mint.
- *502. ↑ 4.10 (G) *Rev.* to l., Ϡ. Uncertain mint.
- *503. ↑ 3.61 (W) (Plated ?) *Rev.* to l., lion's head. Uncertain mint.
- *504. ↓ 4.25 (G) *Rev.* below, A. Side.¹⁷
- *505. ↑ 4.13 (W) *Rev.* to l., Ω ; below, KΛ. Mylasa.¹⁸
- *506. ↗ 4.20 (W) *Rev.* symbol off flan; below, KΛ. Mylasa.
- *507. ↑ 4.21 (F) *Rev.* to l., Ω . Mylasa.
- *508. ↗ 4.17 (F) *Rev.* to l., M in wreath; to r., club. Uncertain mint.
- *509. ↑ 4.23 (G) *Rev.* to l., illegible; below Π or TP . Uncertain mint.
- *510. ↑ 4.22 (G) *Rev.* to l., X or X. Uncertain mint.
- *511. ↑ 4.19 (VG) *Rev.* to l., ⊙ Ξ . Uncertain mint.
- *512. ↑ 4.23 (G) *Rev.* to l., Ϡ . Uncertain mint.
- *513. ↗ 4.23 (G) *Rev.* to l., K ; below, Ϡ . Uncertain mint

DEMETRIUS POLIORCETES

References are to the types and dies in E. T. Newell, *The Coinages of Demetrius Poliorcetes* (London, 1927).

The dates are those given by Newell.

Obv.: Nike standing l. on prow, holding trumpet and stylis.

Rev.: ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ Poseidon striding l., brandishing trident, chlamys on l. arm.

Tetradrachms

- c514. ↗ 16.93 (F) Salamis. Newell 22, ca. 300–295 B.C.
- c515. ↑ 17.11 (F) Salamis. Newell 23: xxvii, ca. 300–295 B.C.

¹⁷ For the attribution, see M. Thompson, "The Cavalla Hoard (IGCH 450)," *ANSMN* 26 (1981), pp. 44–48.

¹⁸ For the attribution of 505–7, see M. Thompson, "The Alexandrine Mint of Mylasa," *Numismatica e antichità classiche* 10 (1981), forthcoming.

- c516. ↑ 17.01 (VG) Ephesus. Newell 51, ca. 301–295 B.C.
 c517. ↑ 17.11 (F) Ephesus. Newell 52, ca. 301–295 B.C.
 518. ↑ 17.20 (F) Ephesus. Newell 52: 97, ca. 301–295 B.C.
 c519. → 17.15 (F) Pella. Newell 68: lvii: 108, ca. 294–293 B.C.
 520. ← 17.17 (VG) Pella. Newell 68: lvii, ca. 294–293 B.C.
 *521. ↗ 17.08 (VG) Amphipolis. Newell 96: lxxxv, ca. 294–293 B.C.

Obv.: Diademed and horned head of Demetrius r.

Rev.: ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ Poseidon seated l. on rock, holding aplustre and trident.

- c522. ↙ 17.06 (VG) Pella. Newell 75: lxiii? ca. 292–291 B.C.

Rev. monogram uncertain but probably as Newell, ✦.

523. ↖ 17.10 (F) Amphipolis. Newell 109: 182, ca. 291–290 B.C.
 524. ↓ 17.21 (F) Amphipolis. Newell 110, ca. 291–290 B.C.
 *525. ↓ 17.10 (F) Amphipolis. Newell 110–12, ca. 291–290 B.C.

Rev. to r., Π, a type unknown to Newell at the time of his catalogue but there anticipated by him, p. 108.

Rev.: ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ Poseidon standing l. with foot on rock, holding trident.

- c526. ↑ 17.07 (VG) Pella. Newell 89, ca. 289-autumn of 288 B.C.
 527. ↙ 17.20 (F) Amphipolis. Newell 116: cxi, ca. 290–289 B.C.
 c528. ↑ 17.05 (G) Amphipolis. Newell 116, ca. 290–289 B.C.
 *c529. ↙ 17.24 (F) Amphipolis. Newell 124: cxxx, ca. 289-autumn of 288 B.C.
 c530. ↑ 17.00 (VG) Amphipolis. Newell 124: cxxxi, ca. 289-autumn of 288 B.C. *Rev.* monogram off flan.
 531. ← 17.03 (F) Thebes. Newell 141, ca. 290 B.C.

ANTIGONUS GONATAS

Obv.: Macedonian shield; in center, head of Pan with pedum at shoulder.

Rev.: ΒΑΣΙΛΕΩΣ ΑΝΤΙΓΟΝΟΥ Athena Alkis; to l., helmet.

Tetradrachms

532. ↗ 16.98 (VF) *Rev.* to r., \mathbb{W} .
 *533. ← 16.69 (VF) As 532.
 534. ↘ 16.87 (VF) As 532.
 535. ↗ 16.64 (VF) As 532.
 *536. ↘ 17.12 (VF) *Rev.* to r., \mathbb{P} .
 *537. ↗ 16.62 (VF) *Rev.* to r., \mathbb{P} .
 *538. ↗ 17.08 (VF) *Rev.* to r., \mathbb{T} .

LYSIMACHUS

References are to the entries in Thompson, "The Mints of Lysimachus," *Essays Robinson*, pp. 163–82. The dates are those given by Thompson. (N) indicates coins from Nicomedia, above, p. 52.

Lifetime tetradrachms

Obv.: Head of deified Alexander III r.

Rev.: ΒΑΣΙΛΕΩΣ ΑΥΣΙΜΑΧΟΥ Athena seated l. holding spear and Nike; l. arm resting on shield.

- 539 (N). ↑ 17.16 (VG) Lampsacus. Thompson 46, 297/6–282/1 B.C.
 540. ↑ 17.07 (G) Lampsacus. Thompson 47, 297/6–282/1 B.C.
 541. ↑ 17.24 (G) Lampsacus. Thompson 49, 297/6–282/1 B.C.
 c542 (N). ↗ 17.22 (VG) Lampsacus. Thompson 49, 297/6–282/1 B.C.
 c543 (N). ↑ 17.14 (F) Lampsacus. Thompson 50, 297/6–282/1 B.C.
 c544 (N). ↗ 17.12 (G) Sardes. Thompson 86, 297/6–ca. 287 B.C.
 545 (N). ↑ 17.12 (VF) Magnesia. Thompson 101, 297/6–282/1 B.C.
 546 (N). ↓ 15.27 (VG, heavily crystallized) Alexandria Troas. Thompson 157, 297/6–292/1 B.C.
 c547 (N). ↑ 17.31 (VG) Ephesus. Thompson 166, ca. 294–287 B.C.
 548. ↗ 17.07 (VG) Amphipolis. Thompson 195, 288/7–282/1 B.C.
 549 (N). ↑ 16.69 (G) Pergamon. Thompson 218, 287/6–ca. 282 B.C.
 550 (N). ↑ 16.53 (VG) Pergamon. Thompson 224, 287/6–ca. 282 B.C.
 551. ↗ 16.80 (VG) Pella. Thompson 244, 286/5–282/1 B.C. Originally listed with hoard but now missing.

- *552. ↑ 16.97 (VG) Perinthus. Thompson 256 (same obv. die),
ca. 283/2 B.C.
- *553. ↗ 16.95 (VG) Uncertain. To l., $\bar{\Delta}$, on seat, $\Delta\Omega$.
- *554. ↑ 16.96 (VF) Uncertain. No monogram.
- *555 (N). ↘ 17.12 (VG) Uncertain. To l., bucranium; on seat,
radiate head in circle?
- *c556 (N). ↘ 17.36 (G) Uncertain. On seat, ΛP .

Posthumous tetradrachms

- *557. ↑ 17.02 (F) Byzantium. Below, l.
- *558. ↑ 16.56 (VG) Byzantium. To l., Λ ; on seat, spiral.¹⁹
- *559 (N). ↑ 16.94 (G) Chalcedon. To l., Γ ; below, ear of grain.
- *560. ↑ 16.84 (VF) Cius. To l., club and Δ ; below bowcase
and KT.
- *561. ↑ 17.03 (VG) Cius. To l., club and Π ; below bowcase and
 Λ .
- *562. ↑ 17.00 (VF) Cyzicus. To l., Γ ; below, torch.
This coin has a markedly wider and thinner flan than
other posthumous Lysimachi in the hoard.
- *563. ↑ 17.15 (FDC) Uncertain. To l., Δ . Newell placed this
type between Chalcedon and Cius in his trays.
- *564. ↑ 17.02 (F) Uncertain. To l., Σ . Newell placed this
type between Chalcedon and Cius in his trays.
- *565. ↗ 17.04 (VF) Uncertain. To l., Λ .
- *566. ↑ 16.63 (VF) Uncertain. No monogram.
- *567. ↑ 16.50 (VF) Uncertain. To l., Λ . Imitation?

Drachms

Obv.: Head of Heracles r.

Rev.: $\Lambda Y \Sigma I M A X O Y$ $\text{BA} \Sigma I \Lambda E \Omega \Sigma$ Zeus enthroned,
holding scepter and eagle.

- *568. ↑ 4.18 (G) Lysimachia. Thompson 7, 299/8–297/6 B.C.
- *569. ↗ 4.13 (VG) Sestus. Thompson 21, 299/8–297/6 B.C.

¹⁹ H. Seyrig, "Monnaies hellénistiques de Byzance et de Chalcédoine," *Essays Robinson*, p. 185.

- *570. ↓ 4.09 (G) Uncertain. To l., forepart of lion; below, torch. This type seems not to be from Lampsacus despite the torch because the position of the legend is the rev. of that in use there.

EUMENES I

Obv.: Head of Philetairus r.

Rev.: ΦΙΛΕΤΑΙΡΟΥ Athena seated l. with spear and shield; to l., ivy leaf; to r., bow; on seat A.

Tetradrachm

- *571. ↑ 17.07 (VF) *Obv.* of U. Westermark, *Das Bildnis des Philetairos von Pergamon* (Stockholm, 1960), group 3, 21, pl. 2.

DATE OF BURIAL

Since the archaeological context of the discovery of the hoard is unknown, we have only the coins themselves as evidence for the probable date at which the hoard was hidden. The latest identifiable regnal coins in the hoard are of three types. First, the posthumous tetradrachm of Lysimachus attributed to the Cyzicus mint (no. 562) has a large, thin flan which would place it comfortably near the middle of the third century B.C.²⁰ Second, the tetradrachms of Antigonos Gonatas found in the hoard are now dated to roughly the same period by Mathisen.²¹ Finally, the sole tetradrachm of Eumenes I fits into the middle of the second of the two groups proposed for Eumenes' coinage by Wester-

²⁰ I. Merker, "The Silver Coinage of Antigonos Gonatas and Antigonos Doson, *ANSMN* 9 (1960), p. 42.

²¹ R. W. Mathisen, "Antigonos Gonatas and the Silver Coinages of Macedonia circa 280–270 B.C.," *ANSMN* 26 (1981), pp. 110–13, suggests that the Pan Heads in the helmet series (as *IGCH* 168) were initiated ca. 271 to finance the Chremonidean War and continued at least into the 250s.

mark.²² Since Eumenes I ruled 262–241 B.C., a date of ca. 250–245 B.C. would be reasonable for the production of this coin. Therefore, on the evidence of these three different regnal coinages, none of which are much worn, the hoard could be as early as “fairly soon after 250 B.C.,” the date reported in *IGCH*.²³

But the tetradrachm of the Aetolian League seen by Schwabacher cannot be as early as 250–245 B.C.²⁴ Leaving aside *IGCH* 168 for the moment, we find that Aetolian tetradrachms otherwise appear for the first time in hoards of the late third century B.C. *IGCH* 179, which has one of these tetradrachms, was buried perhaps as late as 200 B.C.²⁵ *IGCH* 186, 187 and 196, probably all buried after 220 B.C., contain Aetolian tetradrachms in greater numbers. The evidence of these four hoards is so consistent that the appearance of an Aetolian tetradrachm in a hoard of the mid-third century would appear to be anomalous. Therefore, the Aetolian tetradrachm which Schwabacher saw has been reported in *IGCH* as probably intrusive.

However, it must be pointed out that, on current evidence from hoards, the other late regnal coinage in *IGCH* 168 could be reconciled with a later burial date. First, the chronological implications of the spread-flan Lysimachus tetradrachm are too imprecise to stand in the way of a later date. Second, tetradrachms of Eumenes I in third-century hoards other-

²² Westermarck, *Philetairos*, pp. 12–17, reaffirms Imhoof-Blumer's assignment to Eumenes I of groups 2 and 3 of the tetradrachms bearing the likeness of Philetairos. Group 2 has 10 obverse dies; group 3 has 20. The tetradrachm in this hoard is from the eleventh die of group 3.

²³ The date was suggested by I. Merker (above, n. 20), pp. 41–42. See also A. R. Bellinger, “The Thessaly Hoard of 1938,” *Congresso internazionale di numismatica Roma 11–16 Settembre 1961*, vol 2, *Atti* (Rome, 1965), p. 57. Neither Merker nor Bellinger mentions the Aetolian League tetradrachm.

²⁴ F. Scheu's opinion (“Coinage Systems of Aetolia,” *NC* 1960, p. 39) that the tetradrachms of the Aetolian League began to be minted as early as the middle of the third century is unreliable. His opinion is based on “style and hoard evidence.” By “style,” however, Scheu means only that these coins have relatively thin flans like those of the Alexander tetradrachms struck in the east after the middle of the third century. His hoard evidence is only *IGCH* 179, on which see the text and n. 25.

²⁵ S. Grunauer-von Hoeschmann, “Lacedaemonian Tetradrachms in Peloponnesian Coin Hoards,” *Proceedings of the Eighth International Congress of Numismatics. New York-Washington September 1973*, ed. H. A. Cahn and G. Le Rider (Paris-Basel, 1976), pp. 79–81.

wise appear only in hoards buried ca. 235–230 B.C. or later.²⁶ Third, the only other hoard to contain the same issues of Gonatas as *IGCH* 168 is *IGCH* 175, which is dated ca. 235 B.C. on the basis of other coins. Furthermore, according to Mathisen's arrangement of Gonatas' coins, there is only one other issue of his tetradrachms later than those found in *IGCH* 168.²⁷ This later group first occurs in *IGCH* 496/1701 (one hoard) of the early second century.²⁸ Drachms of the same style as Mathisen's last group first turn up in *IGCH* 179 and 187, both buried ca. 220 or later.²⁹ On the basis of hoard evidence, therefore, the last series of Gonatas' tetradrachms should be placed at the very end of his reign. This date would allow the preceding groups of Gonatas' tetradrachms (those of *IGCH* 168) to be as late as the 240s or even the 230s.

It appears that a case could be made for regarding the latest regnal issues of *IGCH* 168 as not out of place in a hoard buried well after 250 B.C. The presence of a tetradrachm of the Aetolian League in FDC condition in the hoard would then indicate a burial date of ca. 220 B.C. because the initiation of this series of coins has been plausibly linked with the need for coinage to meet the expenses of the Social War of 220–217 B.C. in which the Aetolians were involved against Philip V.³⁰ As we have seen, the hoard evidence (leaving aside *IGCH* 168) confirms this dating. If a lower date for *IGCH* 168 were to be accepted, it would be easy to account for its burial near Larissa ca. 220 B.C. Philip V used Larissa as a

²⁶ In chronological order, *IGCH* 1447, 1425, 1529, 1764, 1370, 458, 1532, 1535, and 1405. O. Mørkholm in *IGCH* dates no. 1447 to ca. 240 B.C., but the presence in this hoard of coins of Attalus I, who succeeded to the throne in 241 B.C., should perhaps mean that the burial date is closer to 230 B.C. than to 240. A date of ca. 235–230 B.C. for *IGCH* 1447 would align it chronologically with the other earliest hoards to contain coins of Attalus I: *Coin Hoards* 1 (London, 1975), no. 59; 2 (London, 1976), no. 73; *IGCH* 179, 458, 1369, 1529, and 1763.

²⁷ Above, n. 21. The tetradrachms of Gonatas in *IGCH* 168 are from Mathisen's groups A, B and C. The only later group is D.

²⁸ Mathisen (above, n. 21), p. 121, indicates that these two groups of coins are part of the same hoard.

²⁹ Mathisen (above, n. 21), p. 121.

³⁰ S. P. Noe, "The Corinth Hoard of 1938," *ANSMN* 10 (1962), p. 37; H. Troxell, "The Peloponnesian Alexanders," *ANSMN* 17 (1971), p. 60.

southern command post during the Social War.³¹ As Polybius informs us, the Aetolians naturally made Larissa one of their targets for raids.³² *IGCH* 168 would have been consigned to the ground during the period of these apparently frequent incursions. There would have been just enough time before such a burial date for one brand-new Aetolian tetradrachm to make its way into the area of Larissa.³³

With a burial date of ca. 220 B.C., *IGCH* 168 would fit in the chronological sequence of hoards from Thessaly after the hoard described in *Coin Hoards* 3 (London 1977), no. 43, of ca. 229–228 B.C. Of course, acceptance of so late a date for the burial of *IGCH* 168 would require us to regard the Aetolian League tetradrachm as part of the original hoard rather than as an intrusion. However, as we have seen, a plausible case has been made for regarding the coin as intrusive and positing a burial date of ca. 250–240 B.C.³⁴ Unfortunately, no comparative hoard evidence is available to settle the question of whether the Aetolian coin described by Schwabacher originally belonged to *IGCH* 168 or not.³⁵

The Athenian tetradrachms in the hoard may provide decisive evidence on this question. In his work in progress on Athenian tetradrachms in the third century B.C., which he has very graciously made available to

³¹ Polybius, 4.66.7, 5.99.1.

³² 5.99.4. See also 4.62.1–4. Scopas's route from Aetolia through Thessaly would have placed Larissa directly in his path.

³³ The apparent absence of Seleucid coinage from *IGCH* 168 is no more an argument in this case against a burial date of ca. 220 B.C. than it is against a date of ca. 250 because Seleucid coins are already present in Thessalian hoards as early as the second quarter of the third century: *IGCH* 144 of ca. 285–275 B.C.; 159 of ca. 264 or 260–240; and 162 of ca. 250. Furthermore, *Coin Hoards* 3 (London, 1977), no. 43 of ca. 229–228 B.C., has no Seleucid coinage.

³⁴ See above, n. 23.

³⁵ The only hoard known from Thessaly in the last quarter of the third B.C. is *IGCH* 214, which, however, contains only bronze coins, some of which are Aetolian. Thessalian hoards of the first half of the second century B.C. are equally unhelpful. The location and the contents of *IGCH* 220 are much in doubt; *IGCH* 228 contains no tetradrachms of any sort; *IGCH* 234 has no Aetolian League tetradrachms, but *IGCH* 237 does. We simply cannot tell whether a Thessalian hoard which included tetradrachms and was buried ca. 220–200 B.C. was likely to contain any tetradrachms of the Aetolian League.

me, John Kroll suggests that the "heterogeneous" style Athenian tetradrachms belong to the period ca. 250–220 B.C. Therefore, a hoard which contains no examples of this type, such as *IGCH* 168, should be dated no later than the middle decades of the third century. A confident statement about the date of burial of *IGCH* 168 must await the publication of the final results of Kroll's study, but it seems reasonable at this stage to assume that the sum of the evidence points to the accepted date of ca. 250 B.C. The Aetolian League tetradrachm must, therefore, be an intrusion, presumably from the market. That early Attalid coinage otherwise appears in hoards from Greece only somewhat later than in *IGCH* 168 would be explained by the general scarcity of such coins in hoards discovered in Europe as opposed to those of Asia Minor.³⁶

Our knowledge of the history of Thessaly in the mid-third century B.C. is too incomplete to allow even a guess at the precise circumstances under which this hoard was hidden away. But some general observations are possible. The kings of Macedonia dominated Thessaly in this period,³⁷ and the geographical position of the region made it the inevitable path for Macedonian armies on the march to the south. For example, Antigonos Gonatas' trip to Corinth for the marriage of his son to the widow of Alexander the tyrant and the subsequent occupation of Acrocorinth in the 240s B.C. may have necessitated troop movements through Thessaly.³⁸ A careful Thessalian might have concealed his coins whenever Macedonian soldiers appeared because a friendly army could be just as dangerous to his finances as a hostile force. *IGCH* 168 may have been buried on some such occasion, or perhaps at the advent of some enemy whose presence in Thessaly has gone unrecorded.³⁹

³⁶ A total of only six tetradrachms of Eumenes I and Attalus I has been reported from hoards in Greece, Macedonia and Thrace: *IGCH* 168, 179, 458 and 867.

³⁷ Polybius, 4.76; Livy, 32.10.7.

³⁸ Plutarch, *Aratus* 17. See also W. W. Tarn, *Antigonos Gonatas* (Oxford, 1913), pp. 372–73.

³⁹ For example, an enemy comparable to the Molossian Alexander II, whose march through Thessaly on his way to attack Macedonia in the 260s B.C. may have led to the burial of *IGCH* 159. See Peter Franke, "Zur Geschichte des Antigonos Gonatas und der Oitaioi," *AA* 73 (1958), pp. 58–59.

OBSERVATIONS

ATHENS

The following table presents the weights of the 72 Athenian tetradrachms in the hoard according to the sub-groups described in the catalogue.

<i>Weight</i>	<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Group 4</i>	<i>Unclassified</i>
16.70					1
16.71					
16.72					1
16.73					
16.74					
16.75					
16.76					
16.77			1		
16.78					1
16.79					
16.80					
16.81		2			1
16.82					
16.83					
16.84			1		1
16.85		1			
16.86	1		1		
16.87					
16.88		1			
16.89	1				
16.90	1	1			1
16.91		1			
16.92		3			
16.93		1			2
16.94	1	2	1		3
16.95		1			
16.96	1	1	1		
16.97		2			
16.98				1	1
16.99				1	
17.00		1			
17.01		2			

<i>Weight</i>	<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Group 4</i>	<i>Unclassified</i>
17.02		3	1		
17.03		1		1	
17.04	1	1			1
17.05		1		2	2
17.06			1		
17.07				1	
17.08				2	1
17.09				2	
17.10		2		2	
17.11					
17.12				1	
17.13		1			
17.14				1	
17.15					
17.16					
17.17					
17.18				1	
Totals	6	28	7	15	16

Groups 1, 2, and 3 cover approximately the same range of weights, but group 4 is concentrated in the upper range. This concentration complements the visual observation that none of the coins in group 4 is excessively worn and indicates that the members of this group are the most recent Athenian issues in this hoard. This conclusion agrees with Bingen's relative chronology for Athenian tetradrachms in which the QD style of group 4 comes after the pi styles of groups 1, 2, and 3.

In Bingen's arrangement, the squarish style of pi 5 finds a parallel in the style of the decoration on the helmet of Athena on the emergency issue in gold produced by Lachares in the period 301–294 B.C. when, as tyrant of Athens, he stripped the statue of Athena Parthenos of its gold in order to pay his mercenaries.⁴⁰ The QD type tetradrachms then follow

⁴⁰ Bingen (above, n. 9), pp. 16–18. For the payment by Lachares, see *The Oxyrhynchus Papyri*, 17 (London, 1927), ed. A. S. Hunt, no. 2082 = Jacoby (above, n. 4), no. 257a, F4. For further references to this period, see T. Leslie Shear, Jr., *Kallias of Sphettos and the Revolt of Athens in 286 B.C.*, *Hesperia Supplement* 17 (Princeton, 1978), pp. 52–53, n. 144; and Christian Habicht, *Untersuchungen zur politischen Geschichte Athens im 3. Jahrhundert v. Chr.* (Munich, 1979), pp. 1–33.

the pi 5 type, but the divergence in style between the two types is great enough, according to Bingen, to justify the assumption of an interruption in mint production after 294 B.C. between the minting of pi 5 and QD type coins.⁴¹

This is not the appropriate place for a detailed investigation of the accuracy of Bingen's date for the transition from pi to QD style, but there are two relevant hoards which deserve mention, only the second of which is discussed by Bingen. *IGCH* 91 from Siphnos contains one well-worn Athenian tetradrachm, which has a QD ornament.⁴² On the basis of the Rhodian coins in this hoard, E. T. Newell placed the burial date between 320 and 300 B.C., and Martin Price's study of some examples of this type of Rhodian coins supports Newell's date.⁴³ Bingen's chronology would of course require a later date of perhaps ca. 290–280 B.C. The publication of Denyse Bérend's promised study of Rhodian coinage of this period will perhaps make it possible to decide whether the date of *IGCH* 91 can be lowered sufficiently to fit Bingen's hypothesis.⁴⁴

IGCH 93 from Lamia in Thessaly includes at least three and perhaps as many as five QD tetradrachms.⁴⁵ The QD tetradrachms exhibit only slight signs of wear in the published photographs and may be among the most recent issues in the hoard. Martin Price's date for the hoard in *IGCH* is ca. 310–300 B.C., and Margaret Thompson has generously informed me that some of the posthumous Alexanders in the hoard would probably be best accommodated by a burial date ca. 300 B.C. or even slightly later. If the Lamia hoard is in fact to be dated 300–295 B.C., it would be impossible to accept Bingen's date of ca. 295 for the Thorikos hoard, which contains no QD types.⁴⁶ However, since *IGCH* 93 has not been fully published and the definitive study on the crucial coins in *IGCH* 91 has not yet appeared, it would perhaps be premature to suggest that

⁴¹ Bingen (above, n. 9), pp. 15, 18–19.

⁴² Newell (above, n. 5), no. 5, pl. 1 (mistakenly labeled no. 4).

⁴³ In J. M. Cook and W. H. Plommer, *The Sanctuary of Hemithea at Kastabos* (Cambridge, 1966), pp. 66–71.

⁴⁴ "Les tétradrachmes de Rhodes de la première période," *SNR* 1972, p. 35.

⁴⁵ See nos. 9, 14, 22 (certain) and nos. 5, 26 (possible) in Svoronos (above, n. 5), pl. 27, where only the Athenian tetradrachms of *IGCH* 93 are illustrated.

⁴⁶ Bingen (above, n. 9), p. 20, discusses the Lamia hoard but does not propose a burial date for it.

Bingen's chronology is inaccurate. It must suffice for the moment to point out the serious nature of the chronological difficulty raised by these two hoards.

LARISSA

The following table gives the weights of the individual pieces according to the catalogue sub-groups.

<i>Weight</i>	<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Group 4</i>	<i>Group 5</i>
5.46				1	
5.47					
5.48					1
5.49					1
5.50			1		
5.51					2
5.52			1		
5.53					
5.54					3
5.55					
5.56				1	1
5.57				1	2
5.58				1	2
5.59					4
5.60					3
5.61			1		4
5.62					1
5.63	2		2	1	
5.64				2	2
5.65				2	1
5.66			1	2	4
5.67	1			1	2
5.68	2			4	3
5.69	1			1	4
5.70	1			1	2
5.71		1		1	3
5.72	1		1		4
5.73			1		2
5.74	1			1	3
5.75			1	1	3
5.76				1	3
5.77	1		1		6

HOARD FROM THESSALY

75

<i>Weight</i>	<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Group 4</i>	<i>Group 5</i>
5.78	1	1			4
5.79				1	2
5.80			1		5
5.81	1	1		1	1
5.82					5
5.83	1			1	2
5.84		1			2
5.85					
5.86					
5.87				1	1
5.88					1
5.89					1
5.90					1
5.91					1
5.92	1				
5.93					
5.94					
5.95				1	1
5.96					
5.97					1
5.98					1
5.99					1
6.00					
6.01					1
6.02					
6.03					
6.04					
6.05					
6.06				1	
6.07					
6.08					
6.09					1
<i>Totals</i>	14	4	11	28	98

The table shows that the weights in group 3 do not extend above the low to medium range, while the two groups with symbols, 1 and 2, have the narrowest range of weights. Since all the coins of group 3 show signs of considerable wear, we should perhaps assume that this group represents a somewhat older issue of this type which has lost weight through more extensive circulation. The narrower ranges of groups 1 and 2 may

be only accidental, but it is possible to imagine that the symbols on these coins indicate particular circumstances at the Larissa mint when closer attention was paid to maintaining a set weight standard. In contrast to the closely aligned weights of these groups, the weights of the coins in the unmarked categories 4 and 5 can differ by as much as 10%. However, the extensive wear on these coins makes any explanation of variations in weight quite hazardous.

As a group, the drachms of Larissa in the hoard are comparable in condition to the more worn of the Alexander drachms in the hoard. See, for example, the illustrations of the contemporary drachm of Salamis (Plate 12, 495) and of the two drachms of Miletus of the \mathcal{M} series, which should belong ca. 325–323 B.C., Plate 13, A and B. (These will be Thompson nos. 107a and 118b in her forthcoming volume on Miletus and Sardes, see note 15.) Two other later drachms of Miletus of the \mathcal{M} series are illustrated as samples of the state of wear of the posthumous drachms of the late 290s, Plate 13, C and D. Although it is perhaps dangerous to put too much trust in conclusions based on the comparison of states of wear of coins that apparently circulated for over half a century before their burial, the evidence of *IGCH* 168 indicates that these issues of Larissa should be roughly contemporaneous with the lifetime and perhaps the early posthumous issues of Alexander. This chronology contradicts that devised in 1925 by F. Hermann strictly on the basis of style,⁴⁷ but other hoard evidence supports the conclusion that the silver coinage of Larissa did not come to an end as early as Hermann and others have supposed. I have argued elsewhere that this numismatic evidence based on a study of relevant hoards in fact complements the historical evidence in pointing to a date of ca. 320–310 B.C. for the end of this coinage as a result of economic collapse in Thessaly.⁴⁸ The drachms of Larissa in *IGCH*

⁴⁷ The drachms of Larissa in *IGCH* 168 belong to Hermann's group 7, rows A and M, dated to the period 395 to 363 B.C. (above, n. 4), pp. 1–69.

⁴⁸ T. R. Martin, "The End of Thessalian Coinage in Silver: Macedonian Policy or Economic Reality?" *Proceedings of the Ninth International Numismatic Congress, Bern, 10–15 September, 1979* (forthcoming). Hermann (above, n. 43), pp. 49, 58–60, places the end of the coinage of Larissa in 343 B.C. on the occasion of Philip II's reorganization of Thessalian government. More recently, J. R. Ellis, *Philip II and Macedonian Imperialism* (London, 1976), p. 238, has suggested that Alexander suppressed all Thessalian coinage ca. 328/7 B.C. Marta Sordi, "La dracma di Aleuas

168 represent the final issues of the civic mint, as A. R. Bellinger recognized.⁴⁹ That a large number of these well-worn pieces continued in local circulation even after the influx of a great quantity of convenient substitutes like the Alexander drachms is a remarkable example of the importance of tradition in monetary circulation.⁵⁰

e l'origine di un tipo monetario di Alessandro Magno," *AJN* 3 (1956), p. 19, argues that the Macedonians forced the civic mints of Thessaly to close after the Lamian War of 323–322 B.C. This date is probably close to the right one for the end of local Thessalian coinage, but I believe that the reasons for this cessation were economic rather than political.

⁴⁹ Above, n. 23, pp. 58–59.

⁵⁰ I am very grateful to Margaret Thompson and Nancy Waggoner for their help in the preparation of this paper. It goes without saying that neither of them is responsible for any errors that may remain.

ANTIGONUS GONATAS
AND THE SILVER COINAGES OF MACEDONIA
CIRCA 280-270 B.C.

(PLATES 17-22)

RALPH W. MATHISEN

After the death of Alexander III of Macedon in 323 B.C., Macedonian mints continued to issue large quantities of Alexander-type tetradrachms (with the head of Hercules right on the obverse and Zeus Aetophorus seated left on the reverse) until 294 B.C., through the reigns of Cassander and his sons. These issues terminate with the well-known racing torch and obelisk-and-star types.¹ The subsequent kings of Macedonia, however, Demetrius I Poliorcetes (294-288 B.C.) and Lysimachus of Thrace (288-281 B.C.), whose coinages and mints have been investigated by E. T. Newell and M. Thompson respectively, seem to have struck mainly if not exclusively idiosyncratic types and not to have issued any Alexander tetradrachms at all from Macedonian mints.²

¹ For the posthumous coinage of Cassander and his sons, see C. Ehrhardt, "The Coins of Cassander," *JNFA* 2 (1973), pp. 25-32, and "A Catalogue of Issues of Tetradrachms from Amphipolis, 318-294 B.C.," *JNFA* 4 (1976), pp. 85-89.

This study began in Prof. Charles Edson's seminar on Antigonid Macedonia at the University of Wisconsin, Madison, in 1975-76, and for his guidance I express my deepest gratitude. I also extend my profound thanks to the American Numismatic Society and especially to Margaret Thompson and Nancy Waggoner, for the opportunity to make use of its many resources during the Graduate Seminar of 1976. Additional thanks are due, moreover, to Colin Kraay of the Ashmolean Museum and Martin Price of the British Museum for their helpful advice, to the University of Wisconsin Graduate School for providing travel funds, and to the individuals listed in n. 6 below for their assistance in supplying casts and photographs. The coins illustrated in the plates are identified on pp. 122-23.

² For Demetrius, see E. T. Newell, *The Coinages of Demetrius Poliorcetes* (London, 1927), pp. 77 ff; and for Lysimachus, see M. Thompson, "The Mints of Lysimachus," *Essays Robinson*, pp. 178-81.

Not until after the death of Lysimachus in 281 were posthumous Alexanders minted again extensively in Macedonia. Several central Balkan hoards deposited beginning at about that date and later (see Table 2) contain posthumous Alexander tetradrachms with style, fabric, module and markings noticeably different from those issued at the time of Cassander and his sons. None of these new issues, moreover, occurs in any of the many large hoards of Alexanders dated to the late 280s.³

The modules of the later coins are significantly larger (27–28 mm and above) than those of the earlier ones (ca. 25.5 mm), and this discontinuity in size by itself attests the chronological hiatus between the pre-294 and the post-280 issues. The portraits of the later issues, furthermore, are characteristically well proportioned, in high relief, and very large, tending to fill the entire slightly meniscus flans. After a vestigial use of the typical Cassander-era depiction of the lion's mane as a double row of short, backward-pointing spikes, the mane comes to be portrayed as a much looser, more flamboyant mass of downward-hanging locks.⁴ The reverse legend of these issues, with one important exception which will be discussed below, reads ΑΛΕΞΑΝΔΡΟΥ.

This fundamental unity among these post-280 tetradrachms, as well as their Macedonian provenance, has long been recognized: Newell placed them all together in the trays of the ANS, and M. Price, in the as yet unpublished sylloge of Macedonian coins in the British Museum, likewise groups them together.⁵ Hitherto, however, there has been no organized analysis of these Macedonian issues per se, and the present study is intended as an attempt to fill this gap. The conclusions presented

³ The following hoards, deposited shortly before 280 B.C., contain none of the coins under discussion although they do contain many Alexander tetradrachms: *IGCH* 144 (Kiouleler, ca. 285–275, 55 Alexanders), *IGCH* 444 (Thessalonica, ca. 280, 104 Alexanders), *IGCH* 448 (Prilepec, ca. 280, 137 Alexanders), and *IGCH* 450 (Cavalla, ca. 280–270, 15 Alexanders). Because these are Balkan hoards, one would expect them to contain recent Macedonian issues.

⁴ Note that during Hellenistic times, from Alexander III on, the modules of the tetradrachms tended to increase constantly and regularly. See Plate 17, 1–6 for the stylistic progression from the Cassander era tetradrachms to the developed style of the post-280 coins.

⁵ I would like to thank Dr. Price, again, for providing me with a copy of his unpublished catalogue of these posthumous Alexanders.

here are based on an analysis of over 350 coins from the major numismatic collections, from published and unpublished hoard reports, from sale catalogues, and from private collections.⁶

The coins comprising these post-280 issues can be organized, on the basis of style, symbols and die links, into eight groups, the majority of which can be dated with some degree of certainty to the decade after ca. 280 by their presence in hoards. These groups, some of which include associated gold staters, are identified according to their most characteristic marks in Table 1.

TABLE 1

The Posthumous Alexander Groups

1. The Omicron-Kappa group, most of whose members bear the monogram OK beneath the throne.
2. The Triton group, a small issue which uniformly has in the left reverse field a Triton blowing a long trumpet and holding a scepter.
3. The Mu group, which usually has under the throne the monogram M and in the left field combinations of the markings crescent, M , and Σ .
4. The Grape group, with a bunch of grapes always in the left reverse field.
5. The Xi group, a small issue with the Greek letter "Xi" in the left reverse field.
6. The Helmet group, the largest group, which invariably bears a Macedonian helmet symbol in the left reverse field.
7. The Bipennis group, a small group with a schematic bipennis, or double-axe, in the left reverse field.
8. The Monogram group, with several different characteristic monograms, which is die linked to a reverse bearing the legend $\text{ΒΑΣΙΛΕΩΣ ΑΝΤΙΓΟΝΟΥ}$.

The individual characteristics of each group, along with the relationships of each group to the other groups, will be discussed in detail below.

⁶ For casts and photographs, I would like to thank U. L. Ducov (Leningrad), F. Glower (Klagenfurt), J. Lallemand (Brussels), P.-H. Martin (Karlsruhe), H. Nicolet (Paris), J. Nordbø (Oslo), M. Œconomides (Athens), A. S. Robinson (Glasgow), M. Schlütter (Hannover), H.-D. Schultz (Berlin), W. Szaivert (Vienna), J. P. A. van der Vijn (The Hague), and U. Westermarck (Stockholm).

DATES OF THE GROUPS: THE HOARD EVIDENCE

Approximate dates for some of the posthumous Alexander groups may be obtained by studying the dated hoards, summarized in Table 2, in which they appear. The group which is represented best in hoards is the Helmet group. Past scholarship has, in general, attributed this group to the early part of the reign of Antigonus Gonatas, king of Macedonia from 277/6 until 240/39 B.C.⁷ Not only is the Macedonian helmet which appears on the Alexanders identical to that on Gonatas' Pan Head tetradrachms, but both also have the same broad, meniscus fabric (cf. Plates 18, 13-14; 21, 35; 22, 37).

And, indeed, there seems to be no reason to dispute this date for the Helmet coins: the earliest hoards in which they occur are the Jabukovac and Kilkis hoards, both of which were deposited ca. 280-275 or shortly thereafter.⁸ Also in the Jabukovac hoard appear single examples of the Bipennis and Xi tetradrachms. The Helmet, Xi and Bipennis groups, therefore, all were in circulation by 280-275 or soon afterward.

It is possible, furthermore, to suggest a relative chronology for some of the groups by an analysis of the Pergis hoard, which, among 386 silver coins, contains 60 Alexander tetradrachms, of which 38 belong to the groups under consideration: Helmet group, 30 coins; Grape group, 6 coins; Mu group, 2 coins. The great number of Helmet coins in the hoard (no other hoard contains more than three), which encompasses all but two of the possible monogram combinations, would indicate that the hoard was being assembled at the very time that the Helmet group was

⁷ For the attribution, see Newell (above, n. 2), p. 14, n. 1; V. J. Hunter, "A Third Century Hoard from Serbia," *ANSMN* 13 (1967), pp. 19-20 (to 277); and D. Vucković-Todorović, *Starinar* 30 (1969), p. 393 (to 277). Price (above, n. 6) dates the coins to "275-270." For the dating of Antigonus' reign, see M. Chambers, "The First Regnal Year of Antigonus Gonatas," *American Journal of Philology* 75 (1954), pp. 385-94.

⁸ The Jabukovac hoard is dated to ca. 280 in *IGCH* 447, but since it includes a tetradrachm of Antiochus I (281-262/1), this date probably is a bit too early. The Kilkis hoard is dated to ca. 280 by *IGCH* 445 and to ca. 275 by the hoard report on file at the ANS.



being issued. The lesser numbers of coins of the other series, moreover, could be taken as an indication that these coins were less common in circulation at the time, that is, that they had been issued earlier.⁹



TABLE 2
Circa 280–270 Macedonian Posthumous Alexanders
Appearing in Hoards

Findspot	Burial	IGCH	Group Number										Pans
			1	2	3	4	5	6	7	8			
Jabukovac	ca. 280/275	447						1	1	1			
Kilkis	ca. 280/275	445							1				
Pergi	ca. 270 ^a	455			2	6		30				1	
Phayttus	ca. 260	159						1				2	
Boeotia	ca. 250	163						1					
Olympia	ca. 230	176			1 ^b			1					
Sophikon	ca. 225	179						1					
Megalopolis	ca. 225	180									1 ^c		
Sparta	ca. 222	181				1		1					
Serbia	ca. 220	458			1 ^d	1		3					
Thrace	ca. 220	817						1					
Sardis	ca. 217	1299						2				1	
Diyarbakir	ca. 205	735									1		
Propontis	ca. 180	888						1 ^e					

^a For date, see text.

^b Coin in the ANS, omitted from hoard report, see E. T. Newell, *The Olympia Hoard*, ANSNNM 39 (New York, 1929).

^c See *ANSMN* 4 (1950), pp. 13–28, no. 6; the monogram given as  should be read as .

^d Not in hoard report (*ANSMN* 13 [1967] p. 17 ff.), cast at ANS,  to left,  under throne.

^e Barbaric imitation.

⁹ The ratio among surviving specimens of the Mu, Grape and Helmet groups, roughly 1:2:4, even if it cannot be taken as exactly indicative of the relative numbers of each issue, is hardly enough to account for this disparity in numbers in the hoard, especially for the great predominance of the Helmet coins. For a more accurate indication of the relative sizes of each of these issues, see below, pp. 86–96.

The scarcity of the Mu and Grape groups in other hoards, moreover, as seen in Table 2, coupled with their relatively large numbers in the Pergi hoard, would suggest that the coins of these groups also were incorporated into the hoard relatively close to their dates of issue.¹⁰ And the approximately simultaneous issue of the three groups is confirmed by other hoard evidence: no specimen of the Mu or Grape Group, in fact, occurs in any hoard not accompanied by at least one specimen of the Helmet group, as seen by *IGCH* 176, 181 and 458 in Table 2, a graphic illustration of the close connection among these groups.

An approximate date for the Pergi hoard can be obtained from an examination of the latest datable coins in it, which, aside from the coins under consideration, includes 12 life-time and early posthumous coins of Lysimachus, who died in 281, a single tetradrachm of Antiochus I (281-262/1), and a single Pan Head tetradrachm of Antigonus Gonatas (277/6-240/39). Because only two of the 386 coins in the hoard, those of Antiochus and Antigonus, can be dated with certainty after ca. 280, and these possibly only very shortly thereafter, the dates assigned to the hoard of 250-200 by Varoucha and ca. 250-230 in *IGCH* are certainly too late.¹¹ Because the vast bulk of the hoard consists of coins minted before 280, and because its two latest coins of any established date could have been minted as early as 280 or very soon thereafter, the assembly of the hoard must have been complete shortly after 280, perhaps by ca. 275-270.

Other considerations, moreover, tend to confirm this date. It already has been seen that the Helmet group of posthumous Alexanders was

¹⁰ The hoard report at the ANS indicates, moreover, that most of the coins of the three groups in the hoard show but little wear, and that several of the Helmet coins are fleur de coin, indicating, again, that 1) these coins were placed in the hoard close to their date of issue, and 2) the Helmet coins were the most recent.

¹¹ See *IGCH* 455 and I. Varoucha, "Chronique des fouilles et decouvertes archéologiques en Grèce en 1956," *BCH* (1957), p. 497. More recently, R. Bauslaugh has suggested that the hoard could have been deposited as early as 270 B.C., in "The Posthumous Alexander Coinage of Chios," *ANSMN* 24 (1979), p. 6.

issued shortly after 280, and the great number of these coins in the Pergi hoard would indicate a similar date for the assembly of the hoard. Finally, the inclusion of but a single Pan Head tetradrachm is conclusive. Because the Pans were issued in such great numbers, there are a priori only two explanations for the anomalous appearance of this single Pan: either the hoard was assembled long after the issuance of the Pan Heads and very few were left in circulation, or the hoard was assembled at a time when the Pans were just beginning to be issued. And because the Pan Heads continued to be common in circulation until the early second century B.C., the latter possibility is by far the more likely choice. Therefore, since the introduction of the Pans is placed almost invariably near the beginning of Gonatas' reign, again one arrives at a date for the deposit of the Pergi hoard of ca. 270 B.C.¹²

Although others of the post-280 Alexander groups also appear in hoards, these hoards are too late to be useful in dating the issuance of these groups. A coin of the Monogram group, for example, does not appear in a hoard until ca. 225, and no coin of the Omicron-Kappa or Triton groups appears in any hoard. A dating of these groups must depend upon other methods, such as analyses of style and the use of control markings.

On the basis of the hoard evidence, then, it is possible to adopt a provisional sequence of appearance for some of the posthumous Alexander groups: first the Mu, then the Grape, and finally the Helmet group, during or after whose issue the Pan Head tetradrachms were introduced. These issues all seem to have appeared during the period 280–270 B.C., by which time the Xi and Bipennis groups also were in circulation. But before any relative chronology can be established more firmly and the other groups put into their rightful places, it is necessary to study carefully the individual characteristics of the groups with regard to one another, and to seek here either a confirmation or a rejection of the sequence suggested by the hoard evidence.

¹² For circulation of the Pan heads, see below, Table 17. For the introduction of the Pan heads, see below, n. 45 and pp. 110–14.

THE INTERNAL STRUCTURE AND CHARACTERISTICS OF THE GROUPS

Each of the eight groups has certain idiosyncracies of style, control markings and die linkage which must be examined before an attempt can be made to place the coins into their proper chronological, geographical and historical contexts.

THE OMICRON-KAPPA GROUP

The Omicron-Kappa group contains 35 specimens, from 14 obverse and 21 reverse dies, and, although no examples of it occur in any hoard, on the basis of style it clearly is the earliest of the groups. Stylistically, some of its specimens are more akin to the pre-294 than to the post-280 issues. The obverse profile is characterized by a protruding nose and chin, and most of the obverses depict the characteristic double row of short backward-pointing spikes in the mane as on the Cassander-era issues (Plates 17, 1-2). As the series progresses, however, the depiction of the mane becomes looser and a closer approximation of the style of the post-280 groups (Plate 17, 3). On the whole, all the obverse dies seem to have been cut by the same hand.

The beginning of the series can be identified not only by this stylistic progression, but perhaps also by the unique use of the monogram X rather than K , eventually the standard form, on one of the reverse dies at the beginning of the series. The early date of this group, earlier than the other post-280 groups, is further attested by the average module of just under 27 mm, smaller than the coins of the other groups, which average 27.5 mm and larger. The most likely possible connection of this group to any of the other groups is the noteworthy XE monogram which appears beneath the throne both at the end of the Omicron-Kappa series and in the small Triton series, which appears to follow the Omicron-Kappa group chronologically. But because neither group can be dated by the hoard evidence, their dates must await the study of the other groups and the historical analysis.

TABLE 3
Omicron-Kappa Group: Sequence of Issues

<i>To left</i>	<i>Under throne</i>	<i>To right</i>	<i>Specimens</i>
[M	⌘		2
M	⌘		2
[K	⌘		8
M	⌘		3
[M	⌘		1
X	⌘		5
P	⌘		1
A	⌘		1
M	⌘		6
M	⌘		2
[M	⌘		1
M		⌘	2
P	⌘		1
			<hr/> 35

THE TRITON AND MU GROUPS

The Triton series coins also appear in no hoards, but certain similarities of style and markings between this group and the Mu group indicate that the two groups were related. Only nine specimens of the Triton series, from four obverse and seven reverse dies, were available for study.

Three of the obverses appear to be by the same hand: the name is portrayed in the two parallel rows of backward-pointing locks as on the old Cassander-period issues, but the locks are portrayed in a much looser fashion (Plate 17, 4), as on the later issues of the Omicron-Kappa series (cf. Plate 17, 3). Although the over-all obverse style of the Triton coins is similar to the developed Omicron-Kappa style, it is not immediately apparent whether they were cut by the same hand. The single anomalous obverse die of the Triton group is cut in a markedly inferior style, with gross and generally large features, especially noticeable in the heavy jowls and chin (Plate 17, 5).

TABLE 4

Triton Series: Sequence of Issues

<i>Under throne</i>	<i>Specimens</i>
[Æ	1
[A	1
[M	2
[M	1
[—	1
[♂	3
	<hr/> 9

The Mu series contains 34 coins from 16 obverse and 24 reverse dies. The obverse dies of the latter half of the series all are cut in a uniform style: a prominent aquiline nose, and a narrow band of curls in the mane, often in three horizontal rows with three strands combed down in each row; most have a prominent high curl at the peak of the forehead (Plate 17, 6). Two dies near the beginning of the series are similar to these, but vary in the depiction of the mane, a narrow band of unrelated strands

hanging down, much like a die of the Xi group (cf. Plates 17, 7; 20, 24). Three other obverse dies at the beginning of the series exhibit the same gross, pudgy features as the anomalous die of the Triton series (Plate 18, 8, cf. Plate 17, 5). Finally, a single obverse die portrays much finer features and a wide, tightly packed mane, very similar to the style of an anomalous die of the Grape series (Plate 18, 9, cf. Plate 20, 22).

TABLE 5

Mu Group: Sequence of Issues

<i>To left</i>	<i>Under throne</i>	<i>Specimens</i>
Μ		1
ΣΜ		1
ⲓΣΜ		1
ⲗ	Μ	1
ⲗ (or ~)	Μ (also 2 staters)	5
ⲗ	Μ	6
ⲗ	Μ	6
ⲗ	Μ	2
ⲗ	Α	2
ⲗ (or ⲗ)	Μ (also 1 stater)	7
ⲗ	ⲗ (?)	2
		—
		34

A single obverse die, which has a style indistinguishable from that of the developed Mu series, occurs with reverses which in place of the usual Mu group markings bear the monograms $\text{Ϝ} \text{ E}$ (Plate 18, 10, cf. Plate 17, 6). Moreover, a specimen of this variety occurs in the Pergamon hoard along with a Mu group coin which has the normal markings of the group, further attesting the connections of this issue to the Mu series. The unusual Ϝ marking also appears on coins of the Triton series (Plate 17, 5), apparently indicating some sort of an administrative tie between the issue of the Triton and Mu groups. The earlier, more Cassander-era style of the Triton coins, finally, would suggest that the Triton group preceded the Mu group in date of issue.

It is noteworthy that three specimens of gold staters with the markings of the Mu group, in two different combinations, also survive (Plate 18, 11-12). The significance of these gold issues will be discussed below.

THE GRAPE, XI AND HELMET GROUPS

The Helmet group, with 120 specimens, from 32 obverse and 73 reverse dies, is not only by far the most numerous group, it is also the most unified with respect to both style and markings. All the obverse dies but two clearly were cut by the same hand and show very little stylistic evolution, indicating that they probably all were cut within a relatively short period. The treatment of the forehead locks, the profile, and the tie at the neck are virtually identical on all these dies. The greatest variation occurs in the depiction of the bottom of the mane, whose strands can curl either forward or backward (Plate 18, 13-14).

The beginning of the series is established by the presence of only coins with the monogram A in the two earliest hoards containing Helmet coins, the Jabukovac and Kilis hoards. The greatest variation in style occurs in the K issues without the XE , where two obverse dies cut in the same style as the old obelisk-and-star issue of the 290s are intruded (Plate 19, 15, cf. Plate 19, 16). In addition, a single barbarous imitation of a Helmet coin with the CE monogram occurs in the Propontis hoard (Table 2), deposited ca. 180 B.C. (Plate 19, 17). The significance of these anomalies will be discussed below.

TABLE 6
 Helmet Group: Sequence of Issues

<i>Below throne</i>	<i>In exergue</i>	<i>Specimens</i>
Ⲗ	Ⲗ	31
Ⲙ	Ⲗ	8
ⲛ	Ⲗ	5
ⲛ	Ⲗ	9
ⲛ	Ⲗ	13
ⲛ		22
ⲛ		17
ⲛ		14
ⲛ		1
		—
		120

The Grape group, with 56 specimens from 19 obverse and 38 reverse dies, is extremely similar stylistically to the Helmet group, and, taking into account stylistic evolution, most of the obverse dies appear to be by the same hand (Plate 19, 18–21; 20, 22). Furthermore, the series apparently is descended from the Mu series: at the beginning of the Grape group comes a coin with the symbol Ⲙ under the throne, as was standard in the Mu group, and an obverse style very akin to the developed style of the Mu series, with the characteristic triple row of curls in the mane, each row with three strands hanging down, and with the high curls at the peak of the forehead and the aquiline-nosed profile (Plate 19, 20, cf. Plate 17, 6).

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To left	Under throne	In exergue	Specimens
—	M		2
[—	M		1
[β	M		5
[E	M		2
[M	∅		2
[M	∅		1
[M	E		2
[E	—		1
[E	β		1
[M	—		4
[M	∅		1
[E	—		3
[E	—		2
[M	—		1
[A	—		3
[A	♥		2
[A	—	♥	2
[A	O		1
[M	♥		1
[E	♥		1
[M	—		3
[X	—		5
[M	—		3
[—	—		2
[—	—		1
[—	—		4
		—	

The most notable anomaly of the Grape series is the presence of two obverse dies cut in the old Cassander-era style, with the mane depicted as a double row of backward-pointing spikes (Plate 19, 21, cf. Plate 17, 1). The large module of coins from these dies, 28+ mm, confirms their membership among the post-280 Grape issues, as does their use of the $\text{P}\Lambda$ monogram, which also occurs on coins in the standard Grape style. The use of such early styles on coins of the Grape group, moreover, tends to support the evidence of the Pergo hoard that the Grape group was struck prior to the Helmet group. A single obverse die otherwise like the remaining dies differs in its treatment of the mane, which is wide with many tightly grouped clumps of hair, and is similar to the anomalous die used in the Mu series (Plate 20, 22, cf. Plate 18, 9). This die was used later, perhaps slightly recut, in the Monogram series (Plate 21, 30).

The very small Xi group, with only eight specimens from the two obverse and six reverse dies, is related to the Helmet group on two grounds. First, one of the obverse dies and all of the reverse dies are stylistically identical to the Helmet coins (Plate 20, 23, cf. Plate 18, 13–14), and second, it already has been noted that a single specimen of the Xi group appears with one of the Helmet group in the Jabukovac hoard. The extreme scarcity of the Xi coins makes even this unique hoard appearance significant, and indicates some chronological association between the two groups. These factors, coupled with the relatively greater over-all stylistic divergence of the Grape group from the Helmet group, would indicate that the issue of the Xi group is to be placed chronologically between that of the Grape and Helmet groups.

TABLE 8

Xi Group: Sequence of Issues

<i>Below throne</i>	<i>Specimens</i>
$\text{P}\Lambda$	2
$\text{P}\Lambda$	6
	—
	8

The slightly anomalous obverse die of the Xi series, although it too seems to have been cut by the same hand as the others, is cut in a style

which appears on a few obverse dies of the Mu series (Plate 20, 24, cf. Plate 17, 7), and this gives further support to the contentions 1) that the Mu group is to be included stylistically with the Helmet family of groups, and 2) that most of the dies in these groups were cut by the same hand.

THE BIPPENNIS AND MONOGRAM GROUPS

The Bipennis group, which has 12 specimens from 2 obverse and 8 reverse dies, and the Monogram group, with 58 specimens from 12 obverse and 43 reverse dies, share some very marked stylistic similarities. On the obverse, the treatment especially of the lion's mane, with thick solid clumps of hair hanging down, the hair at the forehead, and the profile, with a very prominent nose, are essentially the same on both groups (Plate 20, 25–26). The reverses of these two groups are distinguished from those of the other post-280 groups by their lack of a back, and, on the Monogram group, of a lower rung, on the throne.

TABLE 9

Bipennis Group: Sequence of Issues

Under throne

—	8
Π	4
	—
	12









The date of introduction of the Bipennis coins can be placed ca. 270 or earlier by virtue of the occurrence of one of them in the Jabukovac hoard (see Table 2). And although no Monogram coins appear in any early hoards, their approximate date of issue can at least be suggested by the appearance, at the end of the series, of coins in the name not of Alexander but of Antigonus (Plate 20, 27–28; 21, 29). These tetradrachms, which most probably would not have been issued after the introduction of the Pan heads, must belong to the early part of Gonatas' reign, and therefore they, like the other groups, can be assigned to the 270s.¹³ The specific dates will be discussed more fully below.

¹³ For the date of these coins, see Newell (above, n. 2), p. 14, n. 1, and H. Troxell, "The Peloponnesian Alexanders," *ANSMN* 17 (1971), p. 75.

The crude and angular style of the Bipennis coins would indicate that their dies were cut before those of the Monogram group. Indeed, the coins in the Monogram group itself show a marked stylistic improvement as the series progresses: the first coin in this group cut in the usual Monogram-group style, which has the monogram χ , is still rather crude and not very much unlike the coins of the Bipennis series (Plate 20, 26, cf. Plate 20, 25); the obverses at the end of the Monogram series, however, and especially that which occurs with the reverses in Antigonos' name, are quite handsome and have well-proportioned features (Plates 20, 27–28; 21, 29).

TABLE 10

Monogram Group: Sequence of Issues

<i>To left</i>	<i>Under throne</i>	<i>To right</i>	<i>Specimens</i>
	χ		2
	χ (also 1 stater)		9
χ	χ		5
	χ		1
			
χ	χ		1
			2
	χ		2
	χ		1
χ			2
χ	χ		1
χ	χ (also 1 stater)		4
	χ		5
χ	χ		11
χ	χ or χ		7
ΒΑΣΙΛΕΥΣ	χ	ΑΝΤΙΓΟΝΟΥ	2
ΑΝΤΙΓΟΝΟΥ		ΒΑΣΙΛΕΥΣ	3
χ or χ			—
			58

Two anomalous obverse styles occur at the beginning of the Monogram series. One is represented by a single obverse die which also was used in the Grape series (Plate 21, 30, cf. Plate 20, 22). The other is characterized by thinner, rather snaky strands in the mane combed down, as well as by a thin straight base of the neck and a wild profusion of locks on the forehead (Plate 21, 31). There are two very similar dies in this style, one of which was recut at some time during its use. The latter die, before recutting, was used at the very beginning of the series, with the monogram Λ , which then seems to have developed into the more complex form A .

The reverses with the name of Antigonos all occur with the same obverse die, which initially had been used with earlier Monogram issues (Plates 20, 27–28; 21, 29), and all the reverse dies exhibit a style wholly different from that of the remainder of the Monogram group. They also have a new, and single, reverse monogram, E , which is positioned irregularly, either under the throne or to the left, where it also can appear as E .¹⁴ The significance of this particular issue will be discussed below, as will be the meaning of the two extant gold staters which bear the markings of the Monogram group (Plate 21, 32–33).

THE MINT ORGANIZATION: INTERNAL EVIDENCE

On the basis of internal evidence, the Omicron-Kappa, Triton, Mu, Grape, Xi and Helmet groups all appear to have been issued under related circumstances and probably in that order. The stylistic similarities and development from one series to the next have been noted, as has been their relative ordering on the basis of the hoard evidence. An indication of their issue under similar authorities is seen in the continuity of the markings which occur on them (see Table 11).

¹⁴ For the five extant specimens of the Alexanders in Antigonos' name, see Troxell (above, n. 13), p. 75, n. 68

TABLE 11

Monogram Continuity of Groups 1 through 6

<i>Omicron-Kappa group</i>	Ξ	⌘	⌘	⌘	⌘	⌘	⌘
<i>Triton group</i>	Ξ	⌘				⌘	⌘
<i>Mu group</i>					⌘	⌘	⌘
<i>Grape group</i>			⌘		⌘	⌘	⌘
<i>Xi group</i>			⌘				⌘
<i>Helmet group</i>			⌘	⌘	⌘		

Such a progression hardly could be fortuitous, especially when one considers that most of these groups made use only of a very limited number of markings.

The Bipennis and Monogram groups, on the other hand, exhibit a similar internal stylistic consistency between themselves, as described above, which is markedly different from that seen among the other groups. Moreover, the markings used on each of the two families of groups are almost entirely mutually exclusive; only the ⌘ monogram appears on both, and this monogram has a special significance which will be made clear below. These two major discontinuities, in style and use of markings, strongly suggest that the Helmet family and the Monogram family were issued with different die cutters and under different authorities, that is, at different mints. What these mints were, however, remains to be seen.¹⁵

In the trays of the ANS, E. T. Newell was ambivalent with regard to the mint of these groups: although he attributed all the silver coins to Pella, he gave some of the associated gold issues to Amphipolis. Moreover, in his published works on the earlier Alexander coinage of Macedonia, after initially opting for Pella as the main Macedonian mint under

¹⁵ L. Müller, *Numismatique d'Alexandre le Grand* (rep. Basel-Stuttgart, 1957), nos. 225–36, attributes the Helmet coins, for example, to an uncertain Macedonian mint, as do, more recently, *SNGCop Macedonia* 713–14 and *SNGFitz.* 2133–34. Price (above, n. 5), however, concurs with the attributions of Newell (see *SNGBYB* 208–11).

Alexander, he was convinced by subsequent study that it must have been Amphipolis.¹⁶

Amphipolis, furthermore, also has been accepted by both Newell and Thompson as the primary mint for the later Macedonian issues of Cassander, Demetrius Poliorcetes and Lysimachus. And the pattern of the continuity of monograms, as seen in Table 12, from the Amphipolis issues of these last three rulers through groups 1–6 of the posthumous Alexanders under discussion here strongly indicates that these Alexander groups as well were issued at Amphipolis.¹⁷

¹⁶ In the ANS's trays, a gold stater of the Monogram group is attributed to Amphipolis. For Newell's initial choice of Pella as the main Macedonian mint under Alexander, see E. T. Newell, *The Reattribution of Certain Tetradrachms of Alexander the Great* (New York, 1912), pp. 25–27, where Newell supported his contention upon his claims that Pella was 1) the capital, 2) flourishing, 3) the treasury center, and 4) near the "rich silver mines of Lete." The last of these, however, can be dismissed immediately: there were no mines at Lete, nor does Newell offer any evidence for any; see A. S. Georgiados, *Archaiologike ephemeris* (1915), pp. 88–93. Similarly, the evidence of the treasury at Pella comes from 168 B.C., and only indicates that this was one of several treasuries, with the more important one, apparently, at Amphipolis (Livy 44.46, 45.29). As for the second reason, there is no indication that other important Macedonian cities were any less "flourishing" than Pella. Newell himself eventually realized the weaknesses of his arguments, for in *Alexander Hoards-Demanhur, 1905*, ANSNM 19 (New York, 1923), p. 67, he states with regard to the primary Macedonian mint that "continued and detailed study . . . appears to prove conclusively that it was located in Amphipolis and not in Pella."

¹⁷ Even in *Reattribution* (above, n. 16), p. 26, Newell realized the "secondary importance" of Pella as a mint under Cassander; see also Thompson (above, n. 2), p. 164, for the predominance of Amphipolis under Cassander. Under Poliorcetes, Newell *Demetrius* (above, n. 2), p. 115, notes that the Amphipolis mintage was "much larger." And for Lysimachus, Thompson (above, n. 2), p. 179 (see also p. 166), states that at the end of Lysimachus' reign, "Amphipolis was unquestionably his chief mint." With such a great weight of evidence in support of the constantly increasing importance of Amphipolis as a Macedonian mint right down to 281, it is difficult indeed to suppose, even under normal circumstances, that Amphipolis suddenly would have been closed and the mint operation transferred to Pella. But this is exactly what an attribution of all the post-280 Alexander groups to Pella requires. And, indeed, it will be seen below that historical circumstances as well in the post-280 period make Pella a very unlikely choice for large minting operations. It should be noted, as well, that a city's role as capital seems not to have been a consideration in the choice of a mint: Cassander's capital

TABLE 12

Continuity of Monograms at Amphipolis Mint

<i>Cassander</i>	Κ	Ε	Π	Θ	Μ	Ε						
<i>Demetrius</i>	Κ	Ε	Π				Μ	Μ	Ε	Π	Α	Ξ
<i>Lysimachus</i>	Κ	Ε	Π	Θ	Μ	Ε	Μ	Μ	Π	Α	Ξ	Α
<i>Omicron-kappa</i>	Κ		Π				Μ	Μ	Μ			Ξ
<i>Triton</i>							Μ		Π	Α		
<i>Mu</i>		Ε									Ξ	
<i>Grape</i>		Ε					Μ		Ξ	Α		Α
<i>Xi</i>												
<i>Helmet</i>	Κ			Θ	Μ	Ε	Ε	?				

Such clear parallelism of the markings would indicate that the attribution of all of these issues to Amphipolis must stand or fall together.

On the other hand, the smaller family of posthumous Alexanders which includes the Bipennis and Monogram groups, whose style and markings clearly ascribe it to a different mint, probably is correctly attributed to Pella. Significantly, one of the few Cassander-era posthumous Alexanders assigned by Newell to Pella bears the markings ΝΚ and Μ (Plate 21, 34), both of which appear on coins of the Monogram group. It now remains to be seen whether this mint arrangement, arrived at through a study of the internal evidence of the coins themselves, can be supported by the historical evidence.

was at Cassandreia and Demetrius' at Demetrias, yet both used Amphipolis as their primary mint. See also n. 41 below for Amphipolis as a mint of the Omicron-Kappa group of posthumous Alexanders. For the markings used by Cassander, see Ehrhardt (above, n. 1); for those of Demetrius, see Newell, *Demetrius* (above, n. 2), pp. 101–15; and for those of Lysimachus, see Thompson (above, n. 2), pp. 178–89. The monogram continuity between the issues of Demetrius and Lysimachus already has been noted by Newell, *Demetrius* (above, n. 2), p. 115, and note also that some of the markings used by Lysimachus at Amphipolis recur at Pella.

HISTORICAL BACKGROUND: MACEDONIA FROM 288 UNTIL 270 B.C.¹⁸

Demetrius Poliorcetes, the father of Antigonos Gonatas, was king of Macedonia from 294 until 288, when he was expelled by a joint invasion of Pyrrhus of Epirus from the west and Lysimachus of Thrace from the east. By 283, Lysimachus had gained all of Macedonia for himself. In 282, Demetrius died in captivity in Asia Minor and Antigonos was left with the remaining family possessions in Greece. Lysimachus was killed in 281 at Couropedium in Asia Minor in a battle against Seleucus, king of Asia, who then claimed Macedonia. But in 281/0 Seleucus was assassinated by Ptolemy Ceraunus, the exiled son of Ptolemy I of Egypt, at Lysimacheia. After being declared king by Lysimachus' veterans, Ceraunus advanced on Macedonia, but he was attacked at sea by Gonatas, who was pressing his own claim to the Macedonian throne.¹⁹ Ceraunus was victorious and established himself in Macedonia only to be killed in 279 by invading Gauls.

Macedonia then was plunged into anarchy for two years, during which time several pretenders contended both with one another and with the invaders. Antigonos finally was successful in gaining the throne in 277/6, when he was proclaimed king of Macedonia after defeating the Gauls in a pitched battle at Lysimacheia. He then recruited Gauls into his own service and spent 276 disposing of the other pretenders and consolidating his position.

Scarcely was this done when Pyrrhus, just back from Italy, pressed his own claim to Macedonia and invaded in 274 and 273. The up-country Macedonians deserted and after Antigonos' Gallic mercenaries had been

¹⁸ The primary sources for these events include Appian, *Syr.* 62–64; Diodorus Siculus 22.3, 11; Diogenes Laertius 2.141–42; Eusebius, *Chron.* 1.38.5 ff; Justin-Trogus 24.1.5–6, *prol.* 25, 25.3–4; Malalas, *Chron.* 196; Memnon of Heraclea 8, 10; Nepos, *De reg.* 3; Pausanias 1.9.8, 1.13.2–4, 10.19.7; Plutarch, *Vit. Dem.* 44, 52–53, and *Vit. Pyrr.* 11–12, 26–34; and Polyaeus 4.17, 6.18. For discussion, see W. W. Tarn, *Antigonos Gonatas* (Oxford, 1913) and *CAH* 7 (Cambridge, 1954), pp. 94–108.

¹⁹ The traditional date of the spring of 280 for the battle between Antigonos and Ceraunus, as in Tarn (above, n. 18), p. 131, has been moved back to the fall of 281 by H. Heineim, "Untersuchungen zur Geschichte der Zeit des Ptolemaios Keraunos," *Historia*, Einzelschriften 20 (Wiesbaden, 1972), p. 72.

annihilated he was forced to retreat to Thessalonica and his fleet in order to recruit new mercenaries. Pyrrhus' presence, however, was ephemeral. Having failed to become king, he decided to attack Sparta instead, and he departed from Macedon. Such garrisons as he had left were soon disposed of by Antigonus, who by 272 was sufficiently reestablished to be able to come to the aid of Sparta in 272 and then to defeat Pyrrhus at Argos, where the Epirote was killed in street fighting.

THE MACEDONIAN MINTS: HISTORICAL CONSIDERATIONS

Historical probability also confirms the likelihood that Amphipolis was more important than Pella as a Macedonian mint at the time of Gonatas and before. Amphipolis was in very close proximity to the mines of Pangaeum, whereas Pella and no such ready supply of silver.²⁰ In the first quarter of the third century, moreover, Pella lost its position as capital of Macedonia to such new foundations as Cassander's Cassandrea and Demetrius' Demetrias.²¹ And in the years after the Gallic invasion of 279, when most of the post-280 issues were struck, Macedonia was in turmoil, especially in the inland regions, where Pella was located.²² Both these considerations would have made Pella unattractive as a mint. Furthermore, the strongest pretenders to the throne of Macedonia in the years 280 and later, Ptolemy Ceraunus and Antigonus himself, based their power upon their navies and the control of the seacoast, where Amphipolis would have been the natural, if not the only, choice of a mint.²³

Indeed, from 280/79 on, prior to his victory at Lysimacheia, it appears that Antigonus was based upon the Thracian coast, and he may have gained control of Amphipolis and the Pangaeum mines at the same time, two or three years before he occupied Pella.²⁴ Gonatas' reliance on his control of the coast is seen again in 274, when both Justin (25.3) and

²⁰ For the mines, see below, pp. 114–18.

²¹ Tarn (above, n. 18), p. 199, and n. 17 above.

²² Tarn (above, n. 18), pp. 139–66.

²³ For the navies, see Memnon of Heraclea 8(13) and Justin 24.5–6.

²⁴ See R. Mathisen, "The Activities of Antigonos Gonatas 280–277 B.C. and Memnon of Herakleia, *Concerning Herakleia*," *The Ancient World* 1 (1978), pp. 71–74, and also Tarn (above, n. 18), p. 164.

Plutarch (*Pyrr.* 26.5) stress that it was to the coastal cities where he fell back to recoup his losses. In fact, in the period before 272, Antigonos only held Pella during the years 276–274, and based on this consideration alone it would be rash to suggest that all the posthumous Alexander groups being discussed were issued there. And finally, one last point can be mentioned in support of Amphipolis as Antigonos' primary mint: the Pergo hoard, which contains such an inordinate number of the post-280 Alexanders, was buried just northwest of Amphipolis. All these considerations indicate that, with a choice limited between Amphipolis and Pella for Gonatas' most important mint, Amphipolis would be the most reasonable choice.²⁵

ANTIGONUS, GOLD AND THE GAULS

Antigonos' extensive campaigns during the period 280–272 B.C. undoubtedly were very expensive. Because he had no kingdom of his own before 277/6, and because even immediately after he became king of Macedonia he could not trust the Macedonians themselves to support him, as shown by their desertion to Pyrrhus in 273, he had to rely primarily upon Greek mercenaries, whose standard rate of pay was at least a drachm a day for the nine or ten month enlistment year.²⁶ To raise this sum, Gonatas initially had to depend solely upon his possessions in Greece, although after ca. 279 B.C. his resources would have been augmented by the output of the mines on the northern Aegean coast.

In 276 he not only recruited Gallic mercenaries, probably including the remnants of those whom he had defeated at Lysimacheia, but he also engaged the Phocian pirate Ameinias to capture Cassandreia.²⁷ No doubt many of the post-280 tetradrachm groups were struck as payment for

²⁵ Of course, other cities on the Thracian coast could have minted posthumous Alexanders at this time, either on their own authority or on that of Antigonos. The grape bunch, for example, commonly was used at Maroneia (see, e.g. *SNGBYB* 493–97). For the tendency towards independence of Macedonian cities at this time, see Tarn (above, n. 18), p. 171.

²⁶ Tarn (above, n. 18), pp. 169–70, and also, for the wages of mercenaries, G. T. Griffith, *The Mercenaries of the Hellenistic World* (Cambridge, 1935), pp. 264–316.

²⁷ Gauls: Polyaeus 4.6.17; Ameinias: Polyaeus 4.6.18.

Gonatas' varied mercenary forces. In fact, it is difficult to find other likely occasions for large issues of posthumous Alexanders during this period; the next best possibility would be Ptolemy Ceraunus in 280–279, and he hardly could have issued more than a fraction of these coins. The only other great campaigner of the decade, Pyrrhus of Epirus, was issuing his own personal types before the time of his second invasion of Macedonia in 274, so it is unlikely that he was responsible for any of the post-280 Alexanders.²⁸

It is fortunate indeed that one of the meager literary remains for this period discusses the financial arrangements made by Gonatas for his employment of a band of Gallic mercenaries. According to Polyaeus 4.6.17, Antigonus prosecuted his campaign against the pretender Antipater Etesias, the nephew of Cassander, by expending a total of 30 talents on the hiring of about 7,500 Gauls under their chieftan Biderius at the rate of a *χρῦσον μακεδονικόν* (Macedonian gold piece) apiece. The initial preference of the Gauls for payment in gold is well known, and it is likely that Antigonus would have had to mint some staters of his own to supplement the Philip and Alexander staters already in circulation.²⁹ In fact, a very few specimens do exist of Alexander type staters struck in the name of Antigonus (Plate 21, 35).³⁰ It is likely, therefore, that these staters, along with the gold of the Mu and Monogram groups (Plate 18, 11–12; 21, 32), were issued for the payment of Gonatas' Gallic mercenaries. And since he did not hire them until 276, this date becomes the terminus post quem for the issue of these posthumous Alexander groups.

A second campaign for which Gonatas is known to have enlisted Gauls occurred in 274/3, when Pyrrhus invaded western Macedonia. After a battle in early 273, Antigonus was compelled to retreat, and his rear guard of Gallic mercenaries was annihilated. Gonatas then, according to Justin 25.3, retreated to Thessalonica, so that he could renew the war after recruiting a band of Gallic mercenaries there.³¹

²⁸ For Pyrrhus' coinage, see below, n. 38.

²⁹ On the Gallic desire for gold, see Polybius 4.46 and Memnon of Heraclea 11(19).

³⁰ At least five specimens of this type exist, all from different dies, in London (8.58 g), Glasgow (8.55 g), Paris (8.57 g), Vienna (8.63 g), and the De Luynes collection no. 1689 (8.57 g).

³¹ Pyrrhus, too, enlisted some Gauls in 273 (Plut., *Vit. Pyrr.* 26.2,6).

THE ISSUES OF THE PELLA MINT

These two campaigns, in 276/5 and 274/3, would have required Gonatas to collect large amounts of gold, and well could have occasioned the issues of gold staters associated with the Mu and Monogram groups. But which issue was minted for which campaign? It is possible to suggest an answer to this question by a close analysis of the Monogram group of tetradrachms and staters. The tetradrachm series terminates with the small issue in Antigonos' name, and it recently has been suggested by Troxell that the latter were issued after Gonatas' expulsion of Pyrrhus' forces from Macedonia in 272.³² And, indeed, a reconstruction of events along these lines not only supports Pella as the mint for the Monogram group, but also can explain one of the anomalies of the Monogram group: the great discontinuity in style and markings between the reverses in the name of Alexander and those in the name of Antigonos.

It would seem that the production of the Monogram group at Pella, which may have begun in 274 as part of Antigonos' response to Pyrrhus' invasion of Macedonia, was interrupted by Pyrrhus' seizure of the city in 273 and not revived until 272, when Gonatas reoccupied the city. He then issued a small series in his own name, using an obverse die remaining from before his expulsion, but with a reverse cut by a new craftsman and with the issue struck under the direction of a new official, Ψ (Plates 20, 27-28; 21, 29). Note that this interpretation also explains one of the anomalies of the Helmet group, the disappearance of the official Ψ midway through the series. He, it appears, accompanied Antigonos to the newly recovered mint of Pella to supervise the issue of Alexander tetradrachms in Antigonos' name in 272.

Such a transfer of personnel, or equipment, in connection with the opening of a mint at Pella apparently occurred once before, when Gonatas first opened the mint there ca. 274, for a die used in the Grape series appears, perhaps slightly recut, in the early part of the Monogram

³² Troxell (above, n. 13), pp. 75-76; she also suggests (n. 68) that the remainder of the Monogram series was struck by Pyrrhus, but gives no evidence.

series (Plates 20, 22; 21, 30).³³ Furthermore, the “snaky” manes of the very early Monogram group are found elsewhere only on some early issues of the Mu group (cf. Plates 21, 31; 18, 8). The personal style of the resident Pella die cutter, however, as described above, soon came to predominate on the Pella issues. The opening of a mint at Pella ca. 274, incidentally, is in fact historically probable, for at this very time Antigonus seems to have been there for his marriage with Phila, the daughter of Antiochus I of Syria.³⁴

The small issue of gold staters in the name of Antigonus, furthermore, is probably parallel to the posthumous Alexanders in Antigonus' name, and would have been needed for the payment of the Gallic mercenaries hired at Thessalonica in 273. These staters would be analogous to the staters issued with the markings of the Monogram group, and the entire Monogram group of Pella, both gold and silver, therefore assumes the following pattern.

TABLE 13

Sequence of Issues of Monogram Group

<i>Year</i>	<i>Events</i>	<i>Silver Issues</i>	<i>Gold Issues</i>
274	Gonatas in Pella	Silver in name of Alexander	Gold in name of Alexander
273	Pyrrhus holds Pella, mint operation interrupted	die linked to	followed by
272	Gonatas recovers Pella	Silver in name of Antigonus	Gold in name of Antigonus

³³ See discussions of Grape and Monogram groups above. For other examples of transferred dies at this period, see Thompson (above, n. 2), p. 169, n. 1.

³⁴ For the marriage, see the “Life of Aratus of Soli” in A. Westermarck, *Biographi graeci minores* (Amsterdam, 1964); for discussion, see Tarn (above, n. 18), pp. 173–74. Tarn, in fact, suggests that this was the occasion of the introduction of the Pan tetradrachms.

Undoubtedly, these issues in his own name can be seen not only as a reassertion of Antigonus' position as sole ruler of all Macedonia, but also as an announcement of his place as a Hellenistic king on an equal footing with the new rulers of Asia and Egypt, Antiochus I and Ptolemy II, both of whom already were striking coinage in their own names. Moreover, the historical circumstances also offer one explanation for the small number of these issues in Antigonus' name: his rapid departure in 272 from Pella for the Peloponnese and his final reckoning with Pyrrhus.

With the Monogram series dated 274/3, it now is possible to suggest a date for the Bipennis group, which also was struck at Pella, as seen above. It would appear that these coins are parallel to the shield/helmet bronze coins which bear an identical schematic bipennis on the reverse and on the obverse the monogram Π , that is, "Pyrrhus." Other issues of the same era bear the monograms Δ and Λ , representing "Demetrius" and "Antigonus."³⁵ The tetradrachms, therefore, probably also were issued during one of Pyrrhus' two occupations of Macedonia, in 288–83 and 273/2.³⁶

For several reasons, the first occupation is the more likely. Not only did he have a legal or quasi-legal status then, but an analysis of the associated bronze coins has shown on other grounds that they, too, probably were issued during the first occupation.³⁷ Furthermore, as was mentioned above, by the time of his second Macedonian invasion, Pyrrhus already was issuing his own types; it is unlikely that he would have gone back to striking posthumous Alexanders once this step had been taken.³⁸ A fourth and final consideration is the clear stylistic precedence of the

³⁵ For the bronze coins, see R. Mathisen, "The Shield/Helmet Bronze Coinage of Macedonia," *SAN* 10 (1979), pp. 2–6.

³⁶ Troxell (above, n. 32) suggests Pyrrhus' second invasion for the issue of these coins. Sketchy notes of Newell at the ANS appear to indicate that he attributed these coins to Pyrrhus as well.

³⁷ For Pyrrhus' position in the Macedonian king lists in 288, see Eusebius, *Chron.* 1.38–39, and Georgius Syncellus, *Chron.* (Bonn corpus) pp. 505–6, 513. In none of the official lists is Pyrrhus' second invasion even mentioned. For the bronze, see n. 35 above.

³⁸ For the personal types of Pyrrhus, see, for example, *BMC Sicily*, pp. 206–7, nos. 491–506, and *BMC Thessaly*, pp. 111–14, nos. 1–47.

Bipennis coins to the Monogram coins, which, because they apparently were struck in 274/3, preclude the later date for the issue of the Bipennis group. The Bipennis group, therefore, was issued ca. 288–83, and the module of the coins would indicate a date toward the end of this span. Moreover, their issue by Pyrrhus confirms the conclusion which already has been reached, that this group, and thus the Monogram group as well, was struck at Pella, for Pyrrhus' control extended no further east.³⁹

THE ISSUES OF THE AMPHIPOLIS MINT

On the basis of its associated gold staters, the Mu group now can be dated to 276/5 B.C., when the Gauls used against Antipater Etesias were paid in gold. The analysis of the stylistic and symbolic progression already has placed the other Amphipolis issues, the Grape, Xi and Helmet groups, later in the chronological sequence. Furthermore, the use of a die of the Grape series in the early part of the Monogram series gives a date of ca. 274 as a *terminis ante quem* for the Grape group, which therefore must have been issued ca. 275/4.

This date, by elimination, leaves only the large Helmet group as Gonatas' primary issue of Alexanders after his loss of Pella and flight from Pyrrhus to Thessalonica in 273. And a large emergency issue on this occasion is consistent with the extreme stylistic and symbolic uniformity of the Helmet group which already has been noted, a uniformity which does not seem to allow for an extended period of issue. Another indication of the emergency nature of the Helmet group is seen in the recall of the craftsman who had cut the dies for the early third-century obelisk-and-star issues: two dies of the Helmet group are cut in this very idiosyncratic style (cf. Plate 19, 15–16).⁴⁰

³⁹ Even though the Bipennis group, therefore, was not issued after 280 B.C., it has been included in this study of the "post 280" groups for the sake of both convenience and completeness.

⁴⁰ The obelisk-and-star issues often are attributed to Uranopolis, see especially N. Breitenstein, "Studies in the Coinages of the Macedonian Kings," *ActaA* 12 (1942),

The disappearance of the primary official $\text{X}\epsilon$ from the Helmet series, it has been seen, probably was occasioned by Gonatas' reopening of the Pella mint in 272, where $\text{X}\epsilon$ oversaw the small issue of posthumous Alexanders in Antigonos' name. The Helmet coins without $\text{X}\epsilon$, then, also would have been issued in 272, and those with it probably in 273, while Antigonos was in eastern Macedonia recruiting new mercenaries to replace those lost in the battles against Pyrrhus.

The only remaining period during which the small Xi series could have been struck is 274/3, for it apparently was issued between the Grape and Helmet groups. Such a date, significantly, would explain the small size of the issue: it was during this same period that Gonatas was at Pella and his new mint there was opened, which temporarily became the main Macedonian mint with the issue of the Monogram group. Then, after the loss of Pella, came the huge issue of Helmet coins from Amphipolis. This turn of events, moreover, probably convinced Antigonos of the unsuitability of Pella as a mint for large issues in the future, for later issues of the Pella mint, as will be seen, appear to have been strictly of a token nature.

Suggestions regarding the dates and significance of the Omicron-kappa and Triton groups must, perforce, be more speculative, as no specimen of either appears in any hoard. Although both groups appear to have been minted at Amphipolis, their stylistic affinities to the Mu, Xi, Grape and Helmet groups are weaker than those among the latter four groups, perhaps indicating a slight hiatus between the cessation of the Triton and the inauguration of the Mu group.⁴¹

The most promising opportunity for putting the Triton series into its historical context comes from an analysis of the very distinctive Triton symbol, portrayed blowing a long trumpet and holding a scepter (Plate

pp. 248-51, as well *SNGCopMacedonia* 704-8, and *SNGAsh.* 2657-58. Others, however, give these coins to Amphipolis, see Ehrhardt, "Catalogue" (above, n. 1) and *SNGBYB* 203. This question, however, is irrelevant for the purposes of this study, as in 273 both Uranopolis and Amphipolis remained in Gonatas' hands. For the silver mines near Uranopolis, see below, pp. 114-18.

⁴¹ The similarity of some of the Omicron-Kappa coins to the earlier Cassander-era issues prompted Ehrhardt, "Catalogue" (above, n. 1), p. 88, to suggest that the former, in fact, may have been minted at Amphipolis.

17, 4-5). This symbol may represent at least two things: first, a reference to the sea, perhaps sea power in general or a sea victory in particular, and second, a reference to regal authority.

Unfortunately, there are the least two possible explanations for the symbol, since both Ptolemy Ceraunus and Antigonus Gonatas were heavily dependent upon naval power during the early 270s. In 281/0, Ceraunus actually defeated Gonatas in a naval battle and then was able to secure the throne of Macedon. This certainly could have resulted in the issue of the Triton group. On the other hand, Antigonus, having inherited his father Demetrius' naval power and prestige, campaigned along the Thracian coast continually during the years 280-277 despite his earlier defeat by Ceraunus: he arrived at Lysimacheia for his battle with the Gauls in 277, for example, not by land but by sea.⁴² For him, the Triton symbol could be analogous to the familiar symbol of the Nike on prow blowing a long trumpet on the coins of his father (Plate 22, 42). The chronological hiatus between the Triton and Mu series noted above would indicate that the Triton coins were struck perhaps ca. 279/8, but it is impossible to attribute them with certainty to either Ceraunus or Gonatas: either could have held Amphipolis at this time.

The Omicron-Kappa group is even more difficult to place in time with any certainty, although it too probably was struck at Amphipolis. Perhaps the best suggestion would be the time between the death of Lysimachus in 281 and the assumption of power in Macedonia by Ceraunus nearly a year later, when Macedonia was technically controlled by Seleucus of Asia but was in fact in the hands of no one. It may be that one of the pretenders of the anarchy of 279-277 made a momentary grasp at power in 281, perhaps Ptolemy, the son of Lysimachus and Arsinoe, who held Cassandreia and the surrounding territory before Ceraunus arrived and expelled him.⁴³

The preceding analysis, then, results in the following probable or tentative dates, mints and issuing authorities for the posthumous Alexander groups under discussion.

⁴² For Antigonus' Thracian campaigns, see n. 24 above.

⁴³ On the pretenders of this period, see Tarn (above, n. 18), pp. 110-72.

TABLE 14
Amphipolis Mint

<i>Group</i>	<i>Date</i>	<i>Issuing Authority</i>
<i>Omicron-Kappa</i>	281/0	Macedonian pretender
<i>Triton</i>	279/8	Ceraunus or Gonatas
<i>Mu</i>	276/5	Antigonus Gonatas
<i>Grape</i>	275/4	Antigonus Gonatas
<i>Xi</i>	274/3	Antigonus Gonatas
<i>Helmel</i>	273-271	Antigonus Gonatas

Pella Mint

<i>Bipennis</i>	288-283	Pyrrhus of Epirus
<i>Monogram</i>	274/3	Antigonus Gonatas
<i>Monogram in name of Antigonus</i>	272	Antigonus Gonatas

THE INTRODUCTION OF THE PAN HEAD TETRADRACHMS

In the past, there has been little doubt that the figure of Pan on Antigonus' Pan head tetradrachms is a reference to the panic fear struck by the Arcadian god into the Gauls at Lysimacheia in 277, and this supposition has been confirmed by an overstrike of one of the Pan-raising-trophy bronze coins of Gonatas on a coin of Lysimacheia.⁴⁴ Although numismatists have agreed, however, that the Pans probably were introduced early in Antigonus' reign, it hitherto has not been possible to suggest a more exact date.⁴⁵ Certain similarities between the latest of the post-280 posthumous Alexander tetradrachm groups and the Pan heads now make this feasible.

⁴⁴ See F. M. Heichelheim, "Numismatic Evidence of the Battle of Lysimacheia," *American Journal of Philology* (1943), pp. 332-33.

⁴⁵ F. Imhoof-Blumer, *MonnGr.*, p. 219, suggested that the Pans were introduced soon after Lysimacheia, and Tarn (above, n. 18), p. 174, concurs. This view has been followed by all later writers, for example, H. Gaebler, *AMNG*, vol. 3, pt. 2 (Berlin, 1935), p. 186, and C. Boehringer, *Zur Chronologie mittelhellenistischen Münzserien* (Berlin, 1972), p. 99.

Several factors link the Pans to the Helmet group of Alexanders. For one thing, the helmet symbol on some of the Pan heads is identical to that on the Alexanders (Plate 18, 13–14, cf. Plates 21, 36; 22, 38). Furthermore, several of the same monograms occur on both of the Helmet types, \mathbb{W} , \mathbb{Z} , and $\mathbb{M}\mathbb{E}$ (or simply \mathbb{E}) on the Alexanders and \mathbb{W} , \mathbb{M} , and \mathbb{E} or $\mathbb{E}\mathbb{P}$ on the Pans.⁴⁶ This similarity of markings is all the more significant in that both groups used overall such a small number of monograms.⁴⁷ Besides indicating that the Helmet Pans, like the Helmet Alexanders, must have been struck at Amphipolis, these considerations also would suggest that the two Helmet groups were chronologically close.

Several anomalies of the Pan head group, moreover, can be explained by having recourse to the Alexander groups. First of all, a small but significant number of Pan reverses appear without the helmet symbol, although they are die linked to and stylistically identical to reverses which do (Plate 22, 40–41).⁴⁸ In place of the helmet, one finds on the left the monograms \mathbb{M} , \mathbb{W} , and \mathbb{P} , which occur on the right, accompanying the helmet, on other Pan reverses. This variation would be explained if the official represented by the helmet symbol was still occupied with the Helmet Alexanders when the issue of the Pans commenced.⁴⁹ This would place the introduction of the Pans in ca. 271/0.

Another often noticed but unsatisfactorily explained anomaly of the Pan series is the small issue of variant style Pans with the Athena on the reverse facing right rather than left (Plate 22, 37 and 39).⁵⁰ Since

⁴⁶ Note, also, that the \mathbb{P} , or a variation of it such as \mathbb{E} , appears to be the monogram used, within a wreath, on some of the staters in Antigonos' name (see above, n. 30). The monogram, however, is very difficult to read clearly.

⁴⁷ The Helmet Alexanders use only eight monograms (see Table 6 above), whereas the Pans, besides \mathbb{W} , \mathbb{M} , and \mathbb{E} , use also \mathbb{P} , \mathbb{N} , \mathbb{T} , \mathbb{K} , and, uniquely, \mathbb{K} and \mathbb{M} .

⁴⁸ I. L. Merker, "The Silver Coinage of Antigonos Gonatas and Antigonos Doson," *ANSMN* 9 (1960), p. 46, dismisses this anomaly as "a mistake of the die-cutter," but because at least four such specimens survive, from four different reverse dies, such an interpretation is extremely unlikely.

⁴⁹ The occurrence of these three symbols on such a small issue supports the contention of Boehringer (above, n. 45), p. 99, that three officials (at least) were responsible simultaneously for the striking of any given group of Pan heads.

⁵⁰ For the purposes of this study, only 14 specimens of this variety could be located, from 10 obverse dies.

these Pans and the Helmet Pans have totally different styles and monograms, they undoubtedly were issued from different mints; yet, an obverse die of the Helmet issue was used with the Athena right issue (Plate 22, 37–38), clearly a case of a transferred die.⁵¹

In the context of the late 270s, moreover, another example of a transferred die already has been attested: from the Grape series of Amphipolis in 275/4 for use in the Monogram group at Pella in 274.⁵² Analogously, therefore, when Gonatas decided to mint Pans at Pella as well as at Amphipolis, an obverse die was brought from Amphipolis to Pella to accelerate the proceedings. And certain idiosyncracies shared by the Athena right Pans and the posthumous Alexanders in Antigonus' name do indeed indicate that both issues were struck at the same mint. In a recent study, H. Troxell has called attention to the variant positioning of the legend on the Alexanders in Antigonus' name: on some coins the name is on the left and on others it is on the right.⁵³ The Pans with Athena right exhibit this same peculiarity, with the name being on the left on eight and on the right on six of the fourteen specimens available for study (Plate 22, 37 and 39).⁵⁴ Therefore, since the Monogram Alexan-

⁵¹ The Pans with Athena right occur with four different monograms in the right field: Λ , PP , PM , and PK . The marking in the left field is a calathus or a Bacchus ring; see J. Beazely, "Bakchos Rings," *NC* 1941, pp. 1–7. Merker (above, n. 48), pp. 47–52, suggested that the transfer occurred in the establishment of an otherwise unknown Macedonian mint at Athens in the late 260s. He neglected, however, to take into account some crucial elements of the Pan series, and the suggestion has been dismissed rightly by Boehringer (above, n. 45), pp. 99, 156–57. The issue of these Pans has conventionally, and correctly, been placed near the beginning of Gonatas' reign, see Boehringer and references in nn. 34 and 45 above.

⁵² For transferred dies, see above, n. 33.

⁵³ Troxell (above, n. 13), pp. 74–76.

⁵⁴ Furthermore, coins with each of the four possible monograms occur with only one positioning of the legend, Λ and PM with the king's name to the right, and PP and PK with it to the left. Merker (above, n. 48), p. 49, fancifully attributes this variation to a desire to have the king's name in front of the Athena; this explanation, however, fails to account for the similar variations on the coins of Demetrius, see Newell (above, n. 2), pp. 82–89, and of Areus of Sparta, see Troxell (above, n. 13), pp. 74–75. The variation may have been due merely to the preference of the individual die cutter.

ders were issued at Pella, the Athena right Pans must have been as well.⁵⁵

As at Amphipolis, the Pella issues of Pan heads show some continuity of their markings with those of earlier series minted at Pella; indeed, a degree of continuity in the markings is noticeable over all the Pella issues from the coins of the end of the Cassander era until the Pan heads as seen in Table 15.

TABLE 15

Monogram Continuity at the Pella Mint

<i>Late Cassander era (ANS)</i>	NK	☞	☞ – A	☞
<i>Pyrrhus (silver and bronze)</i>		☞	☞	
<i>Monogram group</i>	NK	☞	☞ – A	☞
<i>Athena right Pans</i>		☞	☞	A

The specific occasion for the introduction of the Pan heads well may have been Gonatas' total defeat of his arch-rival Pyrrhus in 272. Certainly, at that time his prestige would have been at by far its highest point: he was now indisputably established in Macedonia, and he had just refurbished his reputation in Greece. This would indeed have been an auspicious occasion for the inception of a new coin type, which would complete the half measure he had taken the year before by putting his own name on Alexander's types. Circa 271, then, Antigonus began issuing Pan heads at Amphipolis, and very shortly thereafter he also struck a small, symbolic, number of them at Pella.⁵⁶

⁵⁵ The figure of the fighting Athena on Macedonian coins is common, and began ca. 326/5 on issues of Amphipolis; it may be a representation of a statue of Athena Alcideus at Pella (Livy 42.51); see A. B. Brett, "Athena ΑΛΚΙΔΗΜΟΣ of Pella," *ANSMN* 4 (1950), pp. 55–72.

⁵⁶ Antigonus' choice of design, indeed, may have been more than merely conventional, for the fighting Athena had been one of the primary types of Pyrrhus (see above, n. 38): just as the Pan reflected Gonatas' triumph over the Gauls, so the Athena may represent his eventual victory over Pyrrhus. Note also that the suggestions of Merker (above, n. 48), pp. 47–48, that the Athena right issues were the result of a die cutter's portrayal of the standard Athena left type "from the point of view of a person on the other side of the statue," and that the "finer work" of the Athena right coins

It was these new Pan heads, therefore, which Antigonos used to finance the single large-scale foreign war of his entire 46 year reign, the Chremonidean War ca. 268–261 against the coalition of Athens, Sparta, Egypt and, eventually, Epirus.⁵⁷ It is to the years after ca. 271, then, that the bulk of the Pan head issues are to be dated.

ANTIGONUS' FINANCIAL RESOURCES

A factor which must be considered when studying large issues of coinage is the source of the metal which was minted. At the beginning of his reign in Greece, in 285, Gonatas had to rely for money upon the tax income from his Greek holdings, and such income never would have yielded much of a surplus, being, in general, sufficient only to maintain his mercenary garrisons.⁵⁸ His forays into Asia Minor and southern Thrace ca. 280 and later surely were motivated, at least in part, by a need to augment his treasury. The mines of eastern Macedonia would have been a good source of metal when he obtained them in the early 270s.

Although the gold mines at Scape Hyle opposite Thasos and at Philippi seem to have been exhausted by ca. 300, the mines of Mt. Pangaeum continued to produce silver and, apparently, gold until well into the second century, for in the 170s, the Macedonian king Perseus had

reflects their Athenian origin, are overly ingenious. The Athena right issues, rather, clearly use the orientation and style of the earlier fighting Athena tetradrachms of Ptolemy I (cf. Plate 22, 39 and 43) instead of the more archaizing style of the Athena left Pans.

⁵⁷ For the dating of the war, see H. Heineim, "Untersuchungen zum chremonideischen Krieg," *Historia*, Einzelschriften 20 (Wiesbaden, 1972), pp. 95–288, who notes that opinions on the date of the archonship of Peithidemos, the traditional date for the beginning of the war, vary greatly, between 270/69 and 265/4. The analysis of the Pan heads in this study, with their date of introduction placed ca. 271/0 and with large issues thereafter, would favor one of the earlier dates; note also, however, that it is not necessary a priori to assume that the Chremonides decree marked the initiation of hostilities: previous attempts by Antigonos to extend his influence in Greece, perhaps by retaking the Piraeus, well may have led to the coalition against him.

⁵⁸ See Tarn (above, n. 18), p. 113.

to repulse a raid by the dynast Abrupolis on the Pangaeum mines.⁵⁹ Philip V, moreover, in an attempt to increase his revenues after his defeat by the Romans at Cynoscephalae in 197 "both reopened old abandoned mines and began new ones in many places" (Livy 39.24).

The very extensive silver mining operations in eastern Chalcidice also may have continued after 300 B.C., at least for a short while, for coins of Alexander and Philip III have been found at the very lowest levels of these mines. The presence of the mines supports the contention of Breitenstein and others that the neighboring city of Uranopolis was the mint of the early third-century series of obelisk-and-star posthumous Alexanders.⁶⁰ Furthermore, Gonatas' use of the die cutter of this series may indicate that he made one last attempt to exploit these deposits in 273, when he was trying to raise as much money as he could as quickly as possible.⁶¹

On the basis of the surviving evidence, it is possible to form a rough estimate of the output of the mines which accrued to the Macedonian royal treasury. At the time of Perseus, the annual income of the entire Macedonian kingdom was only about 200 talents, and of this perhaps 100 was from the mines.⁶² If the increased exploitation at this time ap-

⁵⁹ For the mines at Scapte Hyle, see Herodotus 6.46, Thucydides 1.100.2-3, and P. Perdrizet, "Scaptesytle," *Klio* (1910), pp. 1 ff.; at Abrupolis, Polybius 22.18.2-3, cf. Livy 42.13.5. For the primary sources on ancient mining activities in Macedonia in general, see Georgiados (above, n. 16), pp. 88-93.

⁶⁰ For Chalcidice, see C. L. Sagul, "The Ancient Mining Works of Cassandra, Greece," *Economic Geology* 23 (1928), pp. 671-80; see also above, n. 40.

⁶¹ As late as the sixteenth century, these deposits were yielding the Turks as much as 3,000 ducats a month, see L. Dominian, "History and Geology of Ancient Gold-Fields in Turkey," *Transactions of the American Institute of Mining Engineers* 42 (1911), pp. 570-75. The small emissions of Macedonia Secunda tetradrachms during the Republican period, ca. 158-149, also would suggest that a small amount of metal continued to be taken from these mines until the end of the Antigonid period, see P. Mackay, "The Coinage of the Macedonian Republics 168-146 B.C.," *Archaea Makedonika* (Thessalonica, 1970), p. 258.

⁶² Plutarch, *Vit. Aem. Paul.* 28.3, cf. Livy 45.18, 29; see also Tarn (above, n. 18), pp. 187-88, for the royal sources of income. The one-half tax reduction by the Romans may, indeed, have been a result not of Roman benevolence but of the loss of income caused by the closing of the gold and silver mines, and, if so, it would indicate that the output of the mines accounted for about half the royal income, or about 100 talents per year.

proximately compensated for the playing out of older deposits, then this figure can be adopted, provisionally, as similar to the output a century earlier.⁶³

The coins themselves also can give an indication of the relative expenditures of Antigonus from one year to the next early in his reign on the basis of the approximate number of dies that were used for each group. Table 16 summarizes the number of specimens, known number of obverse dies and estimated total number of obverse dies for each of the series which has been discussed.⁶⁴

It can be seen that Antigonus' production for each of the early years of his reign was approximately equal, with about 20 or 25 obverse dies being used every year.⁶⁵ The Helmet output, however, being roughly twice this size, may in fact represent two years of production, that is, 273/2 and 272/1, at the Amphipolis mint, which therefore would place the introduction of the Pan head tetradrachms in 271 because, as seen above, they seem to have appeared at the very end of the Helmet Alexander series.

More speculatively, it is possible to use several different means of estimating Gonatas' annual expenditures in absolute terms. Using the suggested mine output for the early second century of 100 talents per year, one could strike 150,000 tetradrachms. It has been calculated independently that a die could produce anywhere from 6,000 to 10,000

⁶³ Note that in the mid 150s, an exceptionally productive output from the mines yielded enough metal for a tetradrachm issue requiring more than 30 obverse dies (see Mackay [above, n. 65], p. 260), a figure which is consistent with the 35 or so obverse dies used for the Helmet group. This, again, would suggest that the output of the mines, at peak productivity, during the reign of Perseus was roughly equivalent to that under Gonatas.

⁶⁴ For the statistical method of estimating the total number of dies used on the basis of the number of specimens and observed dies, see C.S.S. Lyon, "The Estimation of the Number of Dies Employed in a Coinage," *NCirc* 73 (1965), pp. 180-81. Because for most of the Alexander groups under discussion there is an average of several specimens per observed obverse die, the margin of error in the numbers of estimated dies will be relatively small.

⁶⁵ Note that in the period 274/3 both the Monogram and the Xi groups were struck.

TABLE 16

Summary of Die Production

<i>Group</i>	<i>Mint</i>	<i>Date</i>	<i>Specimens</i>	<i>Silver: Observed Obv. Dies</i>	<i>Silver: Estimated Obv. Dies</i>	<i>Gold: Observed Obv. Dies</i>
<i>Bipennis</i>	Pella	288-283	12	2	2-3	
<i>Omicron-Kappa</i>	Amphipolis	281/0	35	14	15-20	
<i>Triton</i>	Amphipolis	279/8	9	4	5-10	
<i>Mu</i>	Amphipolis	276/5	34	16	20-25	2
<i>Grape</i>	Amphipolis	275/4	56	19	20-25	
<i>Monogram</i>	Pella	274/3	58	12	15	5
<i>Xi</i>	Amphipolis	274/3	8	2	3-5	
<i>Helmet</i>	Amphipolis	273-271	120	32	35	
<i>Pan</i>	Amphipolis	271-265	350	80	85	

coins, and if this were the case in the 270s, then anywhere from 15 to 25 dies would have been necessary for the 150,000 coins, a number which is extraordinarily consistent with the number of dies actually observed for each year.⁶⁶ This consideration alone indicates that the figure of 100 talents per year can be accepted as a rough approximation of the Macedonian mine output for the late 270s.

In the early years of Gonatas' reign, moreover, the silver coinage would have represented the pay for his Hellenized mercenaries because, as noted above, the Gauls preferred gold. The average mercenary's wage of a drachm a day would mean that for the nine or ten month military year, Antigonos' 100 talents could support some 2,000 mercenaries, with a maximum of an equal number being supported by the remainder of the 200 talent annual income, which, presumably, would be collected in previously minted coins.⁶⁷ This number of between 2,000 and 4,000 mercenaries can be compared to the 3,300 non-Gallic mercenaries employed by Antigonos Doson at the battle of Sellasia in 222.⁶⁸

Although it must be stressed that the numbers arrived at can only be approximate, the great degree of internal consistency among them indicates that any margin of error could not be prohibitively great. One consideration which does show through very clearly is the extremely restricted financial straits in which the Antigonid kingdom of Macedonia operated from its very beginning. The total regal income of only 200 talents in 170 B.C., in the time of Perseus, was, in fact, all the Antigonids ever had to work with, and the restrictions which this imposed upon them, especially with regard to their ability to hire additional manpower, makes their successes against Northerners, the Seleucids, the Ptolemies and, for a time, the Romans, all the more remarkable.

⁶⁶ For the figure of 10,000, see P. Grierson, *Numismatics* (London, 1975), p. 109, for 8,000, p. 157; and for 6,000, see M. Thompson, *The New Style Silver Coinage of Athens* (New York, 1961), p. 170.

⁶⁷ On mercenaries' pay, see above, n. 26.

⁶⁸ Polybius 2.65, and of these, 3,000 were infantry and 300 were cavalry. Note also that Doson's thousand Gauls are listed separately from the mercenaries per se, indicating that, as at the time of Gonatas, Gallic auxiliaries were not considered to be full-fledged mercenary troops.

ANTIGONUS' FISCAL POLICY

Antigonus' attempt to issue gold and silver posthumous Alexanders in his own name was very short-lived, as is demonstrated by their excessive rarity.⁶⁹ These issues of 272 B.C. were but a transitional phase leading up to his commitment to his own types, the Pan heads. His desire, albeit short-lived, to continue the Alexander types, is nevertheless worthy of investigation.

The evidence of the hoards would indicate that the Alexander type coins were intended for circulation primarily in the north, probably for the payment of mercenaries and, perhaps to a lesser extent, for trade. Tribes such as the Thracians and Illyrians would have been long accustomed to Alexander coins, and the soon-common Celtic imitations of Alexander tetradrachms in the Danube area shows that the Gauls rapidly overcame their initial preference for payment in gold.⁷⁰ The Pan heads, however, as seen above, served a different purpose: to establish Gonatas as a Hellenistic monarch and to pay for the Chremonidean War in Greece.

The three earliest hoards containing Gonatas' posthumous Alexanders all were found north of the Aegean (see Table 2), at Jabukovac in Yugoslavia, and Kilkis and Pergis in eastern Macedonia. Furthermore, the Serbia and Thrace hoards, both deposited ca. 220 and both containing Gonatas' Alexanders, probably represent payment to Gallic and Illyrian mercenaries who fought for Antigonus Doson at Sellasia in 222.⁷¹ Finally,

⁶⁹ See above, nn. 14 and 30.

⁷⁰ On the rapid Hellenization of the Gauls in Greek service, see C. B. Welles, "Gallic Mercenaries in the Chremonidean War," *Klio* 52 (1970), pp. 477-90. For Illyrians in Macedonian service, see Polybius 2.65. For the hoards see above, Table 2.

⁷¹ Polybius 2.65. The continuing use of these older issues suggests that as of 272 none of Gonatas' successors had issued any further Alexander types. See H. Seyrig, "Monnaies hellénistiques III: Philippe V ou les Bottieens," *RN* 1963, pp. 14-18, however, for the suggestion that Demetrius II (239-229 B.C.) may have issued posthumous Alexanders. A. Mamroth, "Die Silbermünzen des Königs Philippos V. von Makedonien," *ZfN* 1930, p. 278, on the other hand, notes that Gonatas struck so many coins that there probably was no need for new issues for some time.

the Propontis hoard of ca. 180 contains a barbarous imitation of a Helmet coin (Plate 19, 17), attesting the popularity of this type in the north.⁷²

TABLE 17

Summary of Pan Heads Found in Hoards

<i>Findspot</i>	<i>Date</i>	<i>IGCH No.</i>	<i>Number of Pans</i>	<i>Antigonid Alexanders</i>
Pergi	ca. 270	455	1	38
Phayttus	ca. 260	159	2	1
Karditsa	ca. 250	162	5	
Larissa	ca. 245	168	7	
Tel Sukas	ca. 240	1528	1	
Eretria	ca. 235	175	15	
Macedonia	ca. 225	(*)	12	
Sardis	ca. 217	1299	1	1
Troas	ca. 215	1301	100 ^b	
Syracuse	ca. 213	2230	11	
Enna	ca. 212	2232	1	
Edremit	ca. 210	1302	1	
Syria	ca. 205	1533	1	
Gordion	ca. 205	1415	1	
Asia Minor	ca. 205	1426	9	
Gordion	ca. 202	1406	1	
Asia Minor	ca. 200	(^c)	1	
Asia Minor	ca. 200	(^d)	12	
Asia Minor	ca. 190	1411	1	
Aleppo	ca. 190	1539	1	
Mektepini	ca. 190	1410	8	
Macedonia	ca. 190	469 = 1701 ^e	16	
Urfa	ca. 170	1772	5	
Pharsalus	ca. 167	237	3	

* *Coin Hoards 1975* (London, 1976), no. 72.

^b This hoard cannot be verified.

^c *Coin Hoards 1975*, no. 73.

^d *Coin Hoards 1975*, no. 74.

^e Records at the ANS indicate that these two hoards are the same.

⁷² This coin, in the ANS, is distinguished from official issues by both its degenerate style and its extremely flat fabric.

That the Alexanders and Pans issued by Gonatas had different areas of circulation also is exemplified well by the hoard evidence. Not a single Pan head, for example, ever has been found in a hoard north of Macedonia, although they are very common in Asia Minor hoards (see Table 17). On the other hand, only a single posthumous Alexander of Gonatas appears in an Asia Minor hoard, in the Sardis hoard of ca. 217. In fact, of the 24 known hoards containing Pan heads and the 14 containing the posthumous Alexanders, only 3 contain specimens of both, that of Sardis just mentioned, and 2 which are more significant, from Pergı and Phaytus. Apparently, the two types circulated together only close to their place of issue, northern Greece and Macedonia, and even then, only relatively close to their initial date of issue. Otherwise, their spheres of reception seem to have been mutually exclusive.

From the standpoint of military recruitment, Antigonus' cessation of Alexander types is probably a result of several factors. First, after 272, with Antigonus firmly in control of Macedonia, his need to recruit large numbers of short-term mercenaries to augment his Macedonian troops declined sharply, and those he did engage, moreover, could be paid with the numerous Alexanders already in circulation. The early acceptance of the Pan heads and the rapid Hellenization of the Gallic mercenaries also would have precluded the necessity of striking further issues of posthumous Alexanders.

CONCLUSION

The very close dating of the posthumous Alexander groups obtained above will allow several existing hoards to be dated with greater accuracy. The Jabukovac and Kilis hoards, for example, now can be dated to ca. 270 B.C. or shortly thereafter, and the Pergı hoard can be dated securely to ca. 270. Moreover, the date of introduction and most extensive issue for the Pan head tetradrachms of ca. 271–265 will yield better dates for the several hoards in which these are among the latest issues.

The study of all the Alexander groups also appears to show that, at most times, only a single die cutter was employed, although in emergencies, other experienced craftsmen could be called back into service. The metrology of the groups, when there is a sufficient number of weighed

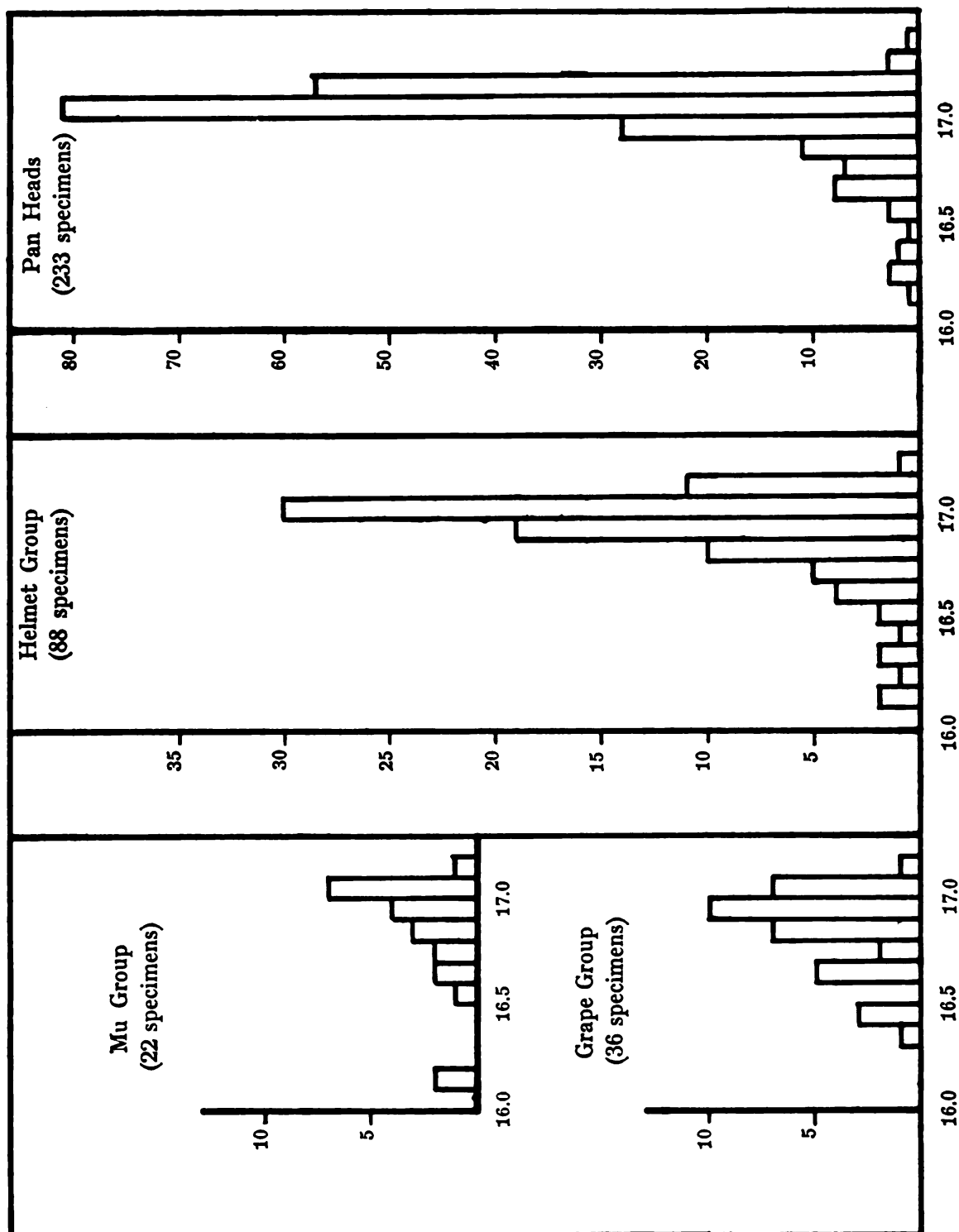
specimens available, shows a growing tendency toward regularity, culminating in the Helmet and Pan head groups, as seen in the accompanying graphs. This may be a result of stricter mint procedures in the late 270s, when the monarchy was more firmly established. None of the groups, on the other hand, shows any regularity of die alignment.

In general, these conclusions regarding early Antigonid coinage, history and fiscal policy should serve as the basis for more detailed study of the subsequent third-century Macedonian coinages.

KEY TO PLATES

- | | |
|----|--|
| 17 | 1. 17.08 ↑ ANS (Armenak hd.) |
| | 2. 17.31 ↙ ANS |
| | 3. 16.60 ↘ ANS |
| | 4. 16.99 ↗ ANS |
| | 5. Mass. Hist. Soc. (cast in ANS) |
| | 6. 16.83 ↘ ANS |
| | 7. 16.89 ↘ ANS |
| 18 | 8. 17.10 ↗ BM (cast in ANS) |
| | 9. 16.79 ↘ ANS |
| | 10. 16.63 ↙ BM (cast in ANS) |
| | 11. 8.55 → ANS |
| | 12. 8.46 ↗ ANS |
| | 13. 16.94 ↗ ANS |
| | 14. 17.08 ← Stockholm |
| 19 | 15. 17.12 Hess/Leu Apr. 2, 1958, 149 |
| | 16. 17.14 ↑ ANS (Armenak hd.) |
| | 17. 17.07 ↑ ANS (Propontis hd.) |
| | 18. 16.80 Hirsch 20, Apr. 2, 1959, 784 |
| | 19. 16.86 ↓ ANS |
| | 20. 16.95 MFA 694 |
| | 21. 16.85 ← ANS |
| 20 | 22. Naville 6, Jan. 28, 1924 (Bement), 722 |
| | 23. 17.11 ← ANS |
| | 24. 16.59 ↗ Berlin (cast in ANS) |
| | 25. 14.10 ↘ ANS |
| | 26. 15.86 ↗ ANS |
| | 27. 16.79 ↘ ANS |
| | 28. 16.33 <i>de Hirsch</i> 1106 |

- 21 29. 16.91 ↘ Athens (cast in ANS)
 30. Seyrig file (photo in ANS)
 31. 17.16 ← Munich (cast in ANS)
 32. 8.54 ↑ ANS
 33. Gotha (cast in ANS)
 34. ANS
 35. 8.58 BM (Seltman, *Greek Coins*, pl. 50, 10)
 36. 17.02 ↑ ANS
- 22 37. 16.70 Svoronos, *Monnaies d'Athènes*, pl. 21, 23
 38. 17.12 Münz u. Med. FPL 254, May 1965, 22
 39. 17.04 ↑ *SNGCopMacedonia* 1198
 40. 17.08 Kricheldorf 9, June 12, 1961, 196
 41. 16.48 Hess 208, Dec. 14, 1931, 379
 42. 17.02 ↑ ANS (*SNGBYB* 346), Demetrius Poliorcetes
 43. 15.63 ↑ ANS, Ptolemy I



THE KUH DASHT HOARD AND THE PARTHIAN "DARK AGE"

(PLATES 23–25)

MICHAEL WEISKOPF

In 1970 a hoard of some 700 Parthian drachms of the first century B.C. and a number of pieces of silver jewelry were discovered in Kuh Dasht,¹ a small village near Khoramabad in the Luristan district of Iran. By mid-1971 the hoard had been dispersed; only 131 coins and 21 pieces of jewelry had been documented with photographs.

This study constitutes the first comprehensive examination of those coins.² I shall provide a brief account of the hoard's original composition. A catalogue of the documented coins will follow. Each type in the hoard will be analyzed. I will refrain from haphazardly adding to the already unwieldy amount of literature offering attributions of anonymous coin-

¹ *IGCH* 1815. The 131 coins presented in this catalogue derive from three sources: 47, identified with an M, were published in Joel L. Malter, "The 'Unknown King': Some Additional Hoard Evidence," *JNFA* 1 (1971) pp. 22–27, pls.; photographs (now in the ANS identified as KD) of an additional 84 coins include specimens in a) a private English collection and b) photographs supplied by an Iranian source, who examined ca. 500 specimens.

² Material from the Kuh Dasht hoard, although not always labeled as such, has figured in the following recent studies: Malter (above, n. 1); Nancy M. Waggoner, "The Coinage of Phraates III of Parthia: Addenda," in Dickran K. Kouymjian, ed., *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honor of George C. Miles* (Beirut, 1974), pp. 15–26; David Sellwood, "Parthian Mints," *JNFA* 4 (1975), pp. 57–60, and "The Drachms of the Parthian 'Dark Age'," *JRAS* 1976, pp. 2–25.

ages to the political luminaries in the "dark age" of Parthian history,³ but will comment on attributions suggested earlier and sequences of issues when the hoard evidence seems to confirm or contradict these hypotheses.⁴

The Iranian source who examined approximately 500 of the drachms reports that the following Sellwood types⁵ (abbreviated as S followed by the type number/coin number) appeared in the hoard:

- S30: more than 150 coins;
- S35: more than 20 coins;
- S36: more than 80 coins;
- S38: more than 80 coins;
- S39: more than 20 coins;
- S40 and S41: together, more than 125 coins.

None of the S39s have photographic documentation, and hence do not appear in my catalogue. The source does not distinguish between S40 and S41 in his count. Only three S41s (coin nos. 128–30) are documented, and this might indicate a small sample of this type in the hoard's original composition. The source notes the presence of a few worn pieces of

³ For the last decade, an article on the Parthian "dark age" has appeared at least once a year. For convenience I cite these very recent studies: Sellwood, *JRAS* 1976 (above, n. 2); A. M. Simonetta and D. G. Sellwood, "Again on the Parthian Coinage from Mithridates II to Orodes II," *Numismatica antichità classiche* 7 (1978), pp. 95–119; Otto Mørkholm, "The Parthian Coinage of Seleucia on the Tigris, c. 90–55 B.C.," *NC* 1980, pp. 33–47.

⁴ I would like to thank Nancy Waggoner and Tony Hackens for their guidance in the preparation of my initial study of the hoard, undertaken as a participant in the American Numismatic Society Graduate Seminar, 1978. Especial thanks to David Sellwood and Otto Mørkholm for reading and commenting on an earlier version of this paper. I thank Mr. Mørkholm for allowing me to read, in manuscript form, his article in *NC* 1980.

⁵ I use the term Sellwood types and their accompanying numerical abbreviations to refer to the numbering system in David Sellwood, *An Introduction to the Coinage of Parthia* (London, 1971). The numerical sequence of the issues presented therein represents neither the actual sequence of issues (as of yet undetermined) nor the current views of Sellwood (which are still in flux).

earlier Seleucid and Parthian issues (although the two documented coins, nos. 1 and 131, are in rather good condition):⁶

Seleucid: very few drachms (no. 131 is Demetrius I);

Mithradates I: four or five drachms (no. 1);

Phraates II: more than two drachms;

Mithradates II: a few drachms.

Apparently, the hoard contained no tetradrachms or bronze issues. The jewelry, illustrated on Plate 25, consists of 14 silver plaques (11 with nude female, facing) and 7 silver rings (all with nude female, facing). The overall composition of the hoard places it squarely in the "dark age" of Parthian coinage and history. The Kuh Dasht hoard becomes significant, for even in its partially documented state (131 coins of a possible 700) it is a representative body of data fixed in time and place.

TABLE 1
Monograms

<i>Monogram</i>	<i>Mint</i>	<i>Monogram</i>	<i>Mint</i>
1	Mithradatkert	5	Nisa
1a		6	[Seleucid era date]
2	Ecbatana	7	Unknown
2a		7a	
2b		7b	
3	Katastrateia (court mint)	7c	
3a		7d	
3b		7e	
3c		7f	
3d		8	[Seleucid era date]
3e		9	Unknown
4	Rhagai		

⁶ No. 1 is a Mithradates I; no 131 is a Demetrius I Soter.

THE CATALOGUE

Note the following abbreviations:

KD Kuh Dasht photograph numbers at the ANS.

M Malter (above, n. 1).

Monogram: see Table 1, below.

S Sellwood (above, n. 5).

Wear: 1, near mint condition; 2, slight wear; 3, worn.

* Indicates coins illustrated on Plates 23–24.

S10. *Obv.:* Portrait of Parthian (Arsaces?) l., wearing bashlik bound with diadem.

Rev.: ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΑΡΣΑΚΟΥ Archer seated r. on omphalos, extending bow.

*1. KD 82: Wear 2; private English collection.

S30.15 coins struck from 15 obverse dies.

Obv.: Bust of king, l., hair covering ear, medium beard; wearing diadem with ribbons extending down in rear; wears torque ending in bead.

Rev.: ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΑΡΣΑΚΟΥ ΘΕΟΠΑΤΟΡΟΣ ΕΥΕΡΓΕΤΟΥ Archer seated r., on throne, extending bow with r. arm, both legs visible.

S30/12. Rev. to r., ΚΑΤΑΣΤΡΑΤΕΙΑ.

2. KD3. *Rev.:* ΘΕΟΠΑΤΟΥ; note Π for M in Megalou. Wear 2; Iranian source reports five coins such as these.

3. KD4. Wear 2; private English collection.

S30/13. Rev. to r., ΕΝΡΑΓΑΙΣ.

4. KD2. Wear 2; Iranian source reports one ΑΝΡΑΓΑΙΣ [sic].

S30/14. Rev. to r., ΝΙΣΑΙΑ

5. KD6. Wear, 3; Iranian source mentions only one coin reading ΝΙCΑΙ (this may be no. 7, below).
 *6. KD7. Wear, 3.
 7. KD8. Wear, 3. *Rev.* clumsy lettering.

S30/15. Rev. to r., ΑΡΕΙΑ.

8. KD1. Wear, 2; Iranian source reports three coins with ΑΡΕΙΑ

S30/16. Rev. to r., ΤΡΑΞΙΑΝΗ.

9. KD9. Wear, 3; Iranian source saw no coins with ΤΡΑΞΙΑΝΗ.

S30/17. Rev. to r., ΜΑΡΓΙΑΝΗ.

10. KD5. Wear, 3. *Rev.* note Π for Μ in Megalou; only two throne legs visible; Iranian source mentions one coin bearing ΜΑΡΓΙΑΝΗ.

S30/18.

11. KD13. Wear, 2.

S30/19.

12. KD10. Wear, 2.
 *13. KD11. Wear, 2.
 *14. KD12. Wear, 2. *Obv.* torque ends in winged equine protome; *rev.* clumsy inscription.
 15. KD14. Wear, 2.

S30. Not in Sellwood.

- *16. KD15. Wear, 2. *Obv.* behind head Α ; *rev.* blundered inscription. Iranian source mentions one coin with letter "H" behind head of king.

S35. 15 coins struck from 11 obverse dies.

Obv.: Bust of king facing, with short beard, wears diadem with ribbons fluttering out on either side of head, wears torque with central medallion.

Rev.: ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΑΡΣΑΚΟΥ ΘΕΟΠΑΤΟΡΟΣ
ΕΥΕΡΓΕΤΟΥ ΕΠΙΦΑΝΟΥΣ ΚΑΙ ΦΙΛΕΛΛΗΝΟΣ
Archer seated r., on throne, extends bow with r. hand.

S35/1. Rev. monogram 4.

17. KD18. Wear, 2.

18. KD19. Wear 2.

19. M10. Illustrated in Malter, *JNFA* 1 (1971), pl. 9.

20. M11.

S35/2. Rev. monogram 2.

*21. KD17. Wear, 2.

22. M3. *Obv.* die of 21.

23. M4. *Obv.* die of 21; *rev.* die of 22.

24. M5. *Obv.* die of 21.

S35/5. Rev. monogram 1a.

25. M6.

S35/6. Rev. monogram 1.

26. M8.

27. KD16. Wear, 2.

S35/7. Rev. monogram 3.

28. M9.

29. M7. *Rev.* monogram 3a (not in Sellwood, but variant of S35/7).

S35/9. Rev. monogram 5.

30–31. M1–2. Same dies.

S36. 19 coins struck with 19 obverse dies.

Obv.: Bust of king l., with short beard; hair covers ear; wears torque with incomplete end visible; diadem with ribbons hanging back behind head.

Rev.: ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΑΡΣΑΚΟΥ ΚΑΙ ΦΙΛΕΛΛΗ-
ΝΟΣ ΕΠΙΦΑΝΟΥΣ ΘΙΛΟΠΑΤΟΡΟΣ ΕΥΕΡΓΕΤΟΥ
Archer seated r. in throne, extends bow with r. hand.

S36/4. Rev. monogram 2.

- 32. KD30. Wear, 3. *Obv.* four string necklet with central medallion.
- 33. KD31. Wear, 3. *Obv.* three string necklet with central medallion; *rev.* monogram 2a.
- 34. KD32. Wear, 3.
- 35. KD33. Wear, 2. *Rev.* poor execution.
- 36. KD44. Wear, 2. *Obv.* three string necklet with central medallion; *rev.*: poor execution.
- 37. KD35. Wear, 2. *Obv.* necklet as 36.
- 38. KD36. Wear, 2; private English collection; Sellwood, *JRAS* (1976), pl. 3, 61 (this coin).
- 39. KD37. Wear, 2; private English collection. Illustrated in Sellwood, *JRAS* (1976), pl. 1, 22 (this coin; same *obv.* die as pl. 1, 23, with monogram 3).

S36/5. Rev. monogram 4.

- 40. KD27. Wear, 2.
- 41. KD28. Wear, 3.
- 42. KD29. Wear, 1–2; private English collection. Sellwood *JRAS* (1976), pl. 3, 74 (this coin, same *obv.* die, pl. 1, 24, with monogram 3).

S36/7. Rev. monogram 1.

- *43. KD20. Wear, 3.
- 44. KD21. Wear, 2.

S36/8. Rev. monogram 3.

- 45. KD24. Wear, 3.
- 46. KD25. Wear, 3.
- 47. KD26. Wear, 3.

S36/9. Rev. monogram 3b.

- *48. KD22. Wear, 2.
- 49. KD23. Wear, 2.

S36/11.

*50. KD38. Wear 3; poor execution.

S38. 62 coins struck from 46 obverse dies.

Obv.: Bust of king l., with long beard, hair covering ears; wears diadem with ribbons hanging down behind head; wears torque with unfinished end visible.

Rev.: ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΑΡΣΑΚΟΥ ΕΥΕΡΓΕΤΟΥ ΕΠΙΦΑΝΟΥΣ ΦΙΛΕΛΛΗΝΟΣ Archer seated r. on throne, extends bow with r. hand.

S38/2. Rev. monogram 3 (variants noted).

*51. KD39G. Wear, 3. *Obv.* of 86.

52. KD42. Wear, 2. Monogram 3c.

53. KD40. Wear, 1; private English collection.

54. KD41. Wear, 2.

55. M38. *Obv.* of 54; *rev.* monogram 3c.

56. M16. *Rev.* monogram 3d.

57. KD43. Wear, 3. *Rev.* monogram 3e.

58. M17. *Obv.* of 57; *rev.* of 70, monogram 3d; *Superior Stamp and Coin*, Dec. 7, 1972, no. 243.

59. KD44. Wear, 3 (esp. *rev.*). *Rev.* monogram 3e.

60. M13. *Obv.* of 59; *rev.* monogram 3d.

61. M22. *Rev.* monogram 3d.

62. M24. *Obv.* of 61.

63. M27.

64. M39. *Rev.* monogram 3c.

65. M40. *Obv.* of 64; *Rev.* monogram 3c.

66. M23. *Rev.* monogram 3d.

67. M25. *Obv.* die of 66.

68. M14. *Rev.*: monogram 3d.

69. M28. *Obv.* of 68.

70. M18. *Rev.* of 50; monogram 3d.

71. M20. *Rev.* monogram 3d.

72. M12. *Rev.* monogram 3d. Illustrated in Malter, *JNFA* 1 (1971), pl. 9.

73–75. M15, 19, 21. *Rev.* monogram 3d.

76. M26.

S38/5. Obv. torque ends in winged equine protome; *rev.* monogram 2b.

77. KD46. Wear, 2.

78. KD47. Wear, 1.

79. M36. *Obv.* of 78.

80. M37.

81. KD45. Wear, 1. *Obv.* torque has unfinished end visible.

S38/6. Rev. monogram 4.

82. KD48. Wear, 1.

83. KD49. Wear 1–2. *Obv.* of 82.

S38/7. Rev. monogram 1.

84. KD39. Wear, 2 (bottom of *obv.* worn).

85. M30. *Obv.* of 84.

*86. KD39F. Wear, 2 (esp. *obv.*). *Obv.* of 51.

87–89. M29, 32, 33.

90. KD62. Wear, 3. *Rev.* monogram illegible. (Monogram 1?)

91. M31.

S38/8. Obv. torque ends in winged equine protome; *rev.* monogram 7 (variants noted).

92–93. M34–35. Same *obv.* die.

94. KD50. Wear, 3. *Obv.* of 92.

95. KD51. Wear, 2 (esp. *rev.*). *Rev.* die break, upper r.

96. M47. *Obv.* of 111; *rev.* monogram 7a.

97. M45. *Rev.*, monogram 7b.

*98. KD52. Wear, 2. *Rev.*, monogram 7c.

99. M41. *Obv.* torque ending uncertain; *rev.* monogram 7d.

100. M42. *Rev.* monogram 7e.

101. M46. *Rev.* monogram 7f.

S38/10. *Obv.* three string necklet with central medallion; *rev.* monogram 6.

102. KD53. Wear, 2. ANS (1971).

103. KD56. Wear, 2. *Obv.* of 102; *rev.* of 102.

104. KD55. Wear, 2.

105. KD54. Wear, 1; private English collection; Sellwood, *JRAS* 1976, pl. 4, 96 (this coin).

106. M43. Harmer, Rooke November 12, 1971, 1010.

107. M44.

S38/11. *Obv.* torque ends in winged equine protome; *rev.*: monogram 8.

*108. KD57. Wear, 2.

*109. KD58. Wear, 3.

110. KD59. Wear, 2; private English collection; Sellwood, *JRAS* 1976, pl. 4, 97 (this coin).

S38. *Not in Sellwood.*

111. KD60. Wear, 2. *Obv.* of 96; *rev.* below archer's bow, \propto ? (cf. monogram 7 and S35/10, S38/19–21, S40/14).

112. KD61. Wear, 3. *Obv.* torque with unfinished end visible, poor portrait; *rev.* blundered inscription, below archer's bow, \dagger (unclear); cf. 81 above.

S40. 15 coins struck from 15 obverse dies.

Obv.: Bust of king I., with short beard; wearing diadem with ribbons hanging down back of head, and beaded necklet with central medallion.

Rev.: ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΑΡΣΑΚΟΥ ΕΠΙΦΑΝΟΥΣ
ΔΙΚΑΙΟΥ ΘΕΟΥΕΥΠΑΓΟΡΟΣ ΚΑΙ ΦΙΛΕΛΛΗΝΟΣ
Archer r., seated on throne, extending bow with r. hand.

S40/1. Rev. monogram 2b; behind archer's head, B.

*113. KD71. Wear, 2; private English collection; Sellwood, *JRAS* 1976, pl. 2, 32 (this coin).

114. KD72. Wear, 2.

115. KD73. Wear, 3.

S40/2. Rev. monogram 1; before ΘΕΟΥ, immobilized E.

116. KD63. Wear, 3.

117. KD64. Wear, 2.

S40/3. Rev. monogram 3b; before ΘΕΟΥ, immobilized E.

118. KD65. Wear, 3.

119. KD66. Wear, 2.

120. KD67. Wear, 3.

*121. KD68. Wear, 2. *Rev.* double strike; private English collection.

S40/4. Rev. above archer's bow, monogram 4.

122. KD74. Wear, 2.

123. KD75. Wear, 2.

124. KD76. Wear, 2.

*125. KD77. Wear, 1. *Rev.* poorly struck; private English collection.

S40/7. Rev. monogram 9 (?).

126. KD69. Wear, 2; cf. S38/19–20, S40/14 for monogram.

*127. KD70. Wear, 2; cf. S40/6 for monogram.

S41. 3 coins struck from 3 obverse dies.

Obv.: Bust of king I., with short beard and hair covering ears, wears diadem with ribbons hanging down behind head and beaded necklet with central medallion.

Rev.: ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΑΡΣΑΚΟΥ ΜΕΓΑΛΟΥ ΕΠΙΦΑΝΟΥΣ ΔΙΚΑΙΟΥ ΘΕΟΥΕΥΠΑΤΟΡΟΣ ΚΑΙ ΦΙΛΕΛΛΗΝΟΣ. Archer r., seated on throne extending bow with r. hand.

S41/2. Rev. monogram 2b.

*128. KD80. Wear, 2.

S41/5. Rev. monogram 1.

*129. KD78. Wear, 2.

S41/9. Rev. monogram 4.

*130. KD79. Wear, (? poorly struck). *Rev.* ΒΑΣΙΛΕΟΝΤΟΣ for Basileos.

Demetrius I Soter.

Obv.: Diademed bust of Demetrius I, r.

Rev.: ΔΗΜΗΤΡΙΟΥ ΣΩΤΗΡΟΣ ΒΑΣΙΛΕΩΣ Apollo seated l. on omphalos.

*131. KD81. Wear, 2 (esp. rev.); private English collection.

ANALYSIS OF THE HOARD

The Kuh Dasht hoard consists primarily of first-century B.C. drachms, the overwhelming number of which portray the minting authority, the king, wearing a diadem, but not the often elaborately decorated *kolah*, or high tiara. There are also a few stray examples of earlier Seleucid and Parthian issues. There are no tetradrachms (including S37s), bronzes, or so-called "helmeted" issues of drachms (S31–34).⁷

It is reasonable to assume that a limited number of earlier issues would remain in circulation into the first century and that they may even have been taken out of circulation by the hoard's owner some time before the burial of the bulk of the hoard. The fine condition of coin nos. 1 and 131 suggest some attempt at savings. The absence of tetradrachms need not create great concern: it is quite possible that this larger denomination,

⁷ S31: Basileōs Megalou Arsakou Autokratoros Philopatoros Epiphanous Philellēnos; S32: Basileōs Megalou Arsakou Epiphanous Philellēnos Euergetou; S33: (no tetradrachms) Basileōs Megalou Arsakou Theopatorou Nikatoros; S34: (no tetradrachms) Basileōs Megalou Arsakou Euergetou Epiphanous Philellēnos; S37: (tetradrachms only) Basileōs Megalou Arsakou Euergetou Philopatoros Epiphanous Philellēnos.

apparently struck in one or two Parthian mints,⁸ was not used in daily commercial transactions and thus did not find its way into the hands of the hoard's owner.

The absence of the "helmeted" issues seems to create a gap in the sequence of issues and hence a more serious difficulty. A preferable explanation suggests that the gap exists only in Sellwood's numbering, i.e. that S31–34 were minted before S30, and that the hoard contains a more or less complete sequence.⁹

Observations (and conclusions) on the degree of wear and the number of die links based on a sample already limited by collectors are difficult to make. Most of the coins to which I was able to assign a degree of wear fell into the category of slight wear, i.e. not exceedingly worn. The number of those which were in excellent condition seemed to increase among the later issues. The Iranian source reported that most of the S41's were in mint condition, covered by a thin film of oxide which could be easily removed. The number of die links was disappointingly small, a situation due to the state of documentation. In the best documented issue, S38, the number of links rose dramatically.¹⁰

⁸ Tetradrachms seem to have been struck only at Seleucia on the Tigris and Susa. For Seleucia, see Robert H. McDowell, *Coins from Seleucia on the Tigris* (Ann Arbor, 1935), pp. 158–77; for Susa, G. LeRider, *Suse sous les Séleucides et les Parthes*, *MMA I* 38 (Paris, 1965), pp. 79–80, and B. Simonetta, "Un tetradramma medito di Artabanus I di Parthia," *Numismatica antichità classiche* 4 (1975), pp. 151–56.

⁹ I follow Mørholm (above, n. 3) who proposes the following sequence, S32, 31, 34, 33, 30, on the basis of stylistic similarities with previous issues, common control marks (for S34 and S30), and hoard evidence (for S33, the Diyarbekir hoard, *IGCH* 1744). The hoard published in D. Sellwood, "A Small Hoard of Parthian Drachms of the First Century B.C.," *SCMB* 1969, pp. 227–32, also supports the priority of S31 and S33. Consult K. Walton Dobbins, "The Successors of Mithradates II of Parthia," *NC* 1975, p. 34.

Sellwood, *JRAS* 1976 (above, n. 2), pp. 4–5, relied on reverse die engravings to suggest the sequence S29, 33, 31, 32, 30, 34, 37, 36, 35. Simonetta and Sellwood (above, n. 3) comment and alter to S (32, 29), 30, 36, 37, 34, 31, (38, 35), (33, 39), 42, 43, 40, 41 (issues struck at the same time appear in parentheses). The Kuh Dasht hoard proves the last part of the sequence erroneous, and I will comment on this in my discussion of S40 and S41.

¹⁰ The only die links occurred in S35 and S38: Two sets of obverse die links and two sets of reverse die links for S35; fourteen sets of obverse die links and two sets of reverse die links for S38.

Some observations were made after a comparison of the obverse and reverse engravers who worked on a particular issue. This "soft" evidence is subjective and requires a considerable number of illustrations to become effective.¹¹ Those observations on engraver ties which have a greater significance will be discussed, and illustrated, under that issue for which they were made.

S30. BASILEOS MEGALOU ARSAKOU THEOPATOROS EUERGETOU

Is the hoard evidence from Kuh Dasht unique, and what does it tell us about the minting authority of S30? One should begin by making a few observations about the some 150 S30s in the hoard. The coins of Theopator can be divided into two groups: the first, and larger, bears the reverse inscription given above. A second, and much smaller, group has an addition, a place name, inscribed to the far right of the archer.¹² There is at least one documented example of each place name (see S30/12-17), plus one coin with a distinctive mark on the obverse (Plate 23, 16).

The hoard most similar in composition to the Kuh Dasht hoard is Gombad hoard, found near Gorgan in ancient Hyrcania, ca. 1955 (*IGCH* 1814).¹³ Among the "thousands" of S30 drachms in that hoard only about twenty bore place names, a proportion not unlike that in the Kuh Dasht hoard. A comparison of the Kuh Dasht S30s with the Gombad S30s in *SNGCopParthia* yielded a die duplicate (no. 57 with Plate 23, 13), and the observation that the same engravers produced dies used

¹¹ The most comprehensive use of engraver ties has been made by Sellwood, *JRAS* 1976 (above, n. 2). Consult Simonetta and Sellwood (above, n. 3), pp. 95-99, 117, for comments. The technique also appears in Waggoner (above, n. 2), p. 21, n. 23 (consult Sellwood, *INFA* 1975 [above, n. 2], pp. 58-59, for comment) and is sporadically used in David Sellwood, "The Parthian Coins of Gotarzes I, Orodes I and Sinatruces," *NC* 1962, pp. 73-89, and "Wroth's Unknown Parthian King," *NC* 1965, pp. 113-35; and Dobbins (above, n. 8).

¹² The Iranian source counted eleven place-name coins. The catalogue adds two he missed (nos. 6 and 9).

¹³ Hoards of value to the investigation of the Parthian "dark age" are discussed in Simonetta and Sellwood (above, n. 3), pp. 111-12, Mørholm (above, n. 3), see especially n. 20 on Mardin II, A. M. Simonetta, "Some Remarks on the Arsacid Coinage of the Period 90-57 B.C.," *NC* 1966, pp. 27-30, Sellwood (above, n. 9), Sellwood, *JRAS* 1976 (above, n. 2), pp. 9-11, Dobbins (above, n. 9), pp. 34-36.

for coins in both hoards. The variety of engravers and the number of obverse dies suggest a large coinage.¹⁴

The place names on the S30 drachms are drawn from throughout the empire (Nisaia, Margiane, Traxiane, Areia, Rhagai, Katastrateia), and it is not unreasonable to assume that a coin bearing a place name was minted in that place.¹⁵ The presence of at least one example of each place name coin in a hoard found in the west of the Parthian realm suggests that S30 was a widely circulated issue.

I am unable to say anything definite about the sequence of coinage within S30: No die links were found between place-name and non-place-name coins. However, the same obverse engravers do seem to produce dies for both categories (e.g. the engraver for nos. 6 and 14 on Plate 23). Perhaps the introduction of place names onto drachms can be seen as part of an evolution toward the use of mint marks and symbols on later issues (S35, 36, 38, etc.).¹⁶

I will name no specific ruler attested in literary sources as the minting authority for S30. Previous scholarship is encumbered with attributions of desperation, made in order that every coinage may have its king and every king his coinage. This unworthy axiom has led to the fabrication of kings, the misuse of a lacuna-filled historical record, and the creation of hard and fast rules resting on no foundation.¹⁷ The number and variety

¹⁴ Mørkholm (above, n. 3), pp. 36–37 and 43–45.

¹⁵ On the problem of place names and mint marks see Sellwood (1975, above, n. 2), Sellwood (1976, above, n. 2), pp. 11–16, and Mørkholm's comments (above, n. 3), n. 5.

¹⁶ Consult Mørkholm (above, n. 3), n. 5.

¹⁷ Comment on earlier scholarship would form a study in itself. For an introduction to the problem of attributions and the nature of the historical record I refer the reader to Mørkholm (above, n. 3), pp. 40–45. The fabrication of kings is exemplified by Wroth's acceptance of Artabanus (*BMCParthia*, pp. xxxi–xxxii). Misuse of the historical record can be found in Sellwood's discussion of S35 and 36 (above, n. 11). The worst offender in the creation of rules is B. Simonetta, "Problemi di numismatica partica: osservazioni sulle attribuzione delle moneti partiche coniate fra il 70 ed il 57 a.C.," *SNR* 1975, pp. 65–78, with echoes in A. Simonetta and Sellwood (above, n. 3), p. 108. The only piece of literary evidence we know to have come directly from the Parthian chancellory is as anonymous as the coinage: the king is called "King of King Arsaces" (C. B. Welles, *Royal Correspondence in the Hellenistic World* [London, 1934], no. 82).

of S30s in both the Kuh Dasht and Gombad hoards do suggest a minting authority of more than transitory importance, a king who enjoyed a lengthy reign over more than just a part of the empire.¹⁸

S35. BASILEOS MEGALOU ARSAKOU THEOPATOROS EUERGETOU EPIPHANOUS KAI PHILELLENOS

The drachms of Theopator Euergetes possess two readily noticeable characteristics of significance. The frontal portrait of the king is a first in Arsacid coinage, and S35 is the only issue in the “dark age” to have one. S35 also represents one of the first issues in the hoard on which appears a series of monograms and symbols, positioned beneath the archer's bow, on the reverse.

Numerically, this is a small issue; The Iranian source reported only about 20 coins. This small number tallies with the composition of the Gombad hoard, in which there were only “some” S35s. However, the monograms and symbols on hoard specimens suggest a coinage minted over most of the Parthian empire. These symbols (monograms 1, 1a, 2, 3, 3a, 4, and 5 for S35) are commonly regarded as combinations of Greek letters, which, when resolved, constitute the major consonants and vowels of a Parthian city. Clues to the identity of these cities are occasionally drawn from the place names of S30.¹⁹ If we accept Sellwood's arguments, S35 was minted in Nisa (and its citadel nearby, Mithradatkert), Agbatana (Ecbatana), Rhagai, and Katastrateia (believed to be a travelling court mint).

Sellwood believes that $\Sigma\Phi$ (and its variants) are to be resolved as ΣTP , the first three letters in $\Sigma\text{TPATEIA}$ or rather, $\text{KATA}\Sigma\text{TPATEIA}$, the S30 place name serving as a model. This symbol stands for mint personnel who travelled with the Parthian king on his seasonal wanderings (Strabo 11.9.1; 11.13.1; 16.1.16) and struck coins as ordered by the king. This explanation accounts for observations of the sort Sellwood makes about the reverse die engravers in *JRAS* 1976 (above, n. 2). My examination of the obverse engravers of the Kuh Dasht hoard has led me

¹⁸ The most recent attribution of S30 is by Mørkholm to Sinatruces (above, n. 3), pp. 42–45. I find it very acceptable.

¹⁹ See n. 15, above.

to note that (in each issue contained in the hoard), although an obverse engraver's work may appear on both ♂ and ♀ coins, that engraver's work never appears on coins of two different "major" monograms or symbols (i.e. monograms numbers 1, 2, 4, with their variants). This would suggest that the personnel of Nisa, Mithradatkert, Rhagai, and Ecbatana remained stationary, but when they received the king's order they struck coins with monogram 3 (and its variants). The striking of these coins may or may not have coincided with the king's presence in the mint city, and they may have served some special (military?) purpose.²⁰

The small size of the S35 coinage has often led to its being associated with some other issue when assigned to a minting authority.²¹ The Kuh Dasht hoard presents no evidence which permits an a priori attribution of S35 and another issue to the same king. In isolation, the 35s of the hoard suggest that their minting authority enjoyed a short reign, but ruled over most of Parthia (that is, if we accept Sellwood's resolution of the monograms and symbols). The use of these monograms and symbols on S35 and their continued use in coinages which we can assign with some certainty to legitimate rulers (e.g. S38 and S40) indicate that the minter of S35 was a legitimate ruler who continued the monetary "reforms" initiated with the striking of the place-name S30s.

Sellwood has associated S35 with S36 (and S37, a "helmeted" issue of tetradrachms with the same reverse inscription as the S36 tetradrachms)

²⁰ The special nature of monogram 3 is illustrated for S36 on Plate 23, 43 and 48. In S38 there is an example of obverse die linkage between two coins which bear different monograms: Plate 24, 86 with monogram 1, and 51 with monogram 3. The obverse engraver responsible for this die did not produce dies for any other "major" monogram or symbol. In S40 the special nature of monogram 3 is illustrated by coins, Plate 24, 121 and 125, the first with monogram 3b, the second with monogram 4.

For S35, only the monogram ♂ (S35/10) is missing from the hoard. Sellwood *JRAS* 1976 (above, n. 2), p. 15, says this is Laodiceia (Nihavend), but presents no compelling evidence.

²¹ Sellwood (above, n. 11) associated S35 and S36 (and S37), assigning all to Darius the Mede. Mørkholm (above, n. 3) believes S35 to be the final issue struck under Sinatruces, a suggestion supported by the revised sequence of issues (placing S31–34 before S30) and the appearance on both S30 and S35 of the same reverse inscription. In his conclusion Mørkholm also advances the theory that S35 and S36 are contemporary.

and attributed all to Darius of Media, a first-century prince defeated by Pompey.²² The evidence from the Kuh Dasht hoard combined with Sellwood's own resolution of the monograms and the historical record prove this attribution erroneous. Sellwood initially based his attribution on observations on the engravers of monograms 2 and 3, which led him to fix the coinage in Media alone.²³ The variety of monograms in the Kuh Dasht hoard is the latest material to destroy this assumption. The literary evidence is unanimous in its definition of Darius' realm as Media alone (App., *Mithr.* 106, 117; Plut., *Pomp.* 36; Diodorus 40.4). His politics seem to have been oriented toward the west, with Antiochus of Commagene and Tigranes of Armenia (App., *Mithr.* 106), and he is always listed with rulers of minor stature (App., *Mithr.* 117 and Diodorus 40.4). In fact, we learn little but his name and that he was defeated by Pompey. If indeed he had ruled in both Nisa and Seleucia on the Tigris (as S36 tetradrachms and S37 would indicate), one would have expected the vain-glorious Pompey to have boasted extensively of and capitalized on his victory, and imposed some sort of political settlement inside Parthia (he does not in the evidence). More importantly, Darius is a contemporary of Phraates III, whom the same source material portrays as the one Parthian king facing no apparent serious internal opposition. It is more reasonable to regard Darius as a petty prince, ruling primarily Media Atropatene, who took advantage of disturbances in the west to aggrandize himself temporarily (hence the definition of his realm as simply Media).

Any future attribution of S35 will have to account for the small size of issue, the variety of monograms and symbols, and the frontal portrait.²⁴

²² Sellwood (above, n. 11). In correspondence with me dated February 1979, he abandons his earlier views.

²³ Sellwood (above, n. 11), pp. 125–26. The observation that S35 and S36 are the earliest issues in the “dark age” to bear monograms raises the question of why legitimate rulers would adopt a pretender's monetary reform. In the same article Sellwood also argues a Median origin (pp. 127–28) for the frontal portrait. This does not tie the coinage to Darius, nor does it connect S36 (and S37) with that same monarch.

²⁴ The brevity of the time during which an issue was struck which bore a frontal portrait may be a clue as well to monetary conservatism: the frontal portrait was unpopular.

**S36. BASILEOS MEGALOU ARSAKOU PHILELLENOS EPIPHANOUS PHILO-
PATOROS EUERGETOU**

In the previous section I pointed out that S36 is not to be tied a priori to S35 and that Darius of Media is not to be regarded as a serious contender for the identification as the minting authority. But like S35, Philopator's coins continued the use of similar monograms and symbols, which appear on the reverse, again below the archer's bow (only monogram 5 is lacking among the hoard specimens). There is also one coin whose poorly executed reverse bears no monogram (Plate 23, 50). The conclusion to be drawn from the resolution of these symbols is that the minting authority of S36 (and hence S37) enjoyed control over most, if not all, of the Parthian realm.

The obverse type portrays the king in profile, yet the physiognomy of the king on the entire issue is different from other rulers of the "dark age"—he is obviously youthful in appearance and his nose is markedly smaller and straighter. Although one cannot dismiss out of hand the idealization of the portrait, it may be suggested that the minting authority was a youthful ruler, perhaps a co-king with some elder authority figure. Perhaps, too, he was a ruler, who in middle age changed his titulature and lost his idealized and small-nosed portrait.²⁵

The Gombad hoard evidence does not prove as useful for S36 as it was for S30 and S35. The same die engravers produced coins in both hoards. The proportion of S36 to S35 and S38 (the "preceeding" and following issues) are clear in the Kuh Dasht hoard, but uncertain in the Gombad hoard, because both S35 and S36 are characterized as "some" and the count of S38s is entangled with the S33s, S34s, and S39s.

²⁵ Such is the suggestion of Mørkholm (above, n. 3), pp. 44–45, in his conclusion, who suggests the attribution of S36 and S37 to the youthful Phraates III, a co-king under his father Sinatruces (minting authority of S30 and S35).

To look ahead to conclusions drawn about S38 and S40: it would seem that modern scholars have made of part of the "dark age," an era in which the heir-apparent rules at the side of his father. Phraates does for Sinatruces, Mithradates III for Phraates (see below, pp. 145–47, 150). One should also take note of a slight variation in the king's accoutrements. Coinage from the Ecbatana mint presents the king wearing either a torque with its incomplete end visible, or a three (or more) string necklet with a central medallion. The latter is similar to that appearing on the S35s.

S38. BASILEOS MEGALOU ARSAKOU EUERGETOU EPIPHANOUS PHILELENOS

Since the time of Wroth, both S38 and S39 have been attributed to Phraates III. A typical line of reasoning runs as follows:²⁶ Identical portraits²⁷ and inscriptions (on the drachms) have tied together both issues. The epithet *Theou* appears on the tetradrachms of S39. Phlegon of Tralles (*FGrH* 257, fr. 12) reports this epithet was used by Phraates. S38 and S39 share the monograms and symbols found on S35, 36, 40 and 41, but a shift in titulature (assuming a development toward the more grandiose) from Basileōs Megalou on S35, 36, 38, 39, 40 to a transitional Basileōs Basileōn Megalou on S41 to a fully developed Basileos Basileon on S42 suggest Sellwood has placed S38 and S39 in proper sequence in relation to the other issues just mentioned. Finally, a rare set of drachms in the later issue S41 call Phraates the father of those drachms' minting authority. Hence the attribution.

The description of Phraates (ruled ca. 70–58 B.C., possible co-regent ca. 74–70 B.C.) which emerges from the primary source material and the description of the minting authority of S38 and S39 which emerges from the numismatic material suggest both men are the same. Sinatruces' son and successor appears as a king who does not have to deal with serious internal threats to his control over the empire, but rather spends most of his time dealing with the ramifications of Armenian aggrandizement under Tigranes and potential threats posed by glory-hungry Roman generals.²⁸ He is assisted in his activities by at least one of his sons,


²⁶ Wroth (above, n. 17), pp. xxxii–xxxiv. See also Mørkholm (above, n. 3), pp. 41–42, 44.



²⁷ The portraiture on both issues is the same, although on S39 the king wears an elaborately decorated *kolah*.

²⁸ Neilson Debevoise, *A Political History of Parthia* (Chicago, 1938), pp. 71–76, gives the references to primary sources. Internal threats seem to take form in the increasing independence of dynasts in border regions. Little is known of the eastern sectors of the empire, yet one might expect generals such as Lucullus to have attempted contact with any serious potential rival to Phraates. Embassies were received (Plut., *Pomp.* 36) from Elymais and Media (Atropatene). See above, pp. 141–42, for discussion of Darius the Mede.

Mithradates III, who will rule Media for his father after Darius' removal (Dio 36.14).²⁹

There is a large, diverse, and well-documented sample of S38 drachms from the Kuh Dasht hoard. The important monograms and symbols, noted in other issues, reappear, and new ones are introduced. Minor differences in the style of portraiture can suggest a large number of mint personnel. There are examples of inferior workmanship (e.g. no. 112).³⁰ These initial observations lead to the conclusion that the minting authority of S38 (and S39) enjoyed a longish reign over most, if not all, of the Parthian empire. So Phraates.

Developments in the types of monograms and symbols which appear on the drachms' reverse can confirm the attribution to Phraates III. Monogram 7 () and its variants make their first appearance in the hoard in S38. Sellwood has resolved the ligature into the Greek letters A P T and attempted to identify the mint as Artemita. Although the city lies close to Kuh Dasht, and in the western sector of the empire, where so many of Phraates' troubles were centered, this identification remains doubtful.³¹

Two additional symbols are found on S38s in the hoard: Monograms 6 () and 8 (). These symbols have been seriously studied by Nancy Waggoner of the ANS, who has proposed that they are to be read as dates in the Seleucid era, the pi actually being a mu.³² Epigraphical evidence in support of the latter statement can be found on the hoard coins themselves: Examine the *Megalou* on Plate 23, 108 and 109, and note that the mu is written as a pi. This is the case on the other hoard coins bearing these same symbols. The Seleucid dates which emerge are S. E.

²⁹ Waggoner (above, n. 2), p. 23; compare Mørkholm (above, n. 3), p. 44.

³⁰ On these last two observations (style and workmanship) compare the results in Sellwood, *JRAS* 1976 (above, n. 2). I can report that when I first worked with the Kuh Dasht hoard I felt I could identify over twenty different hands producing the obverse dies.

³¹ Proposed in Sellwood, *JNFA* 1975 (above, n. 2), p. 60, and *JRAS* 1976 (above, n. 2), p. 15; questioned by Mørkholm (above, n. 3), n. 5.

³² Waggoner (above, n. 2), pp. 19–20, 23. In support: B. Simonetta (above, n. 17), p. 71, and Mørkholm (above, n. 3), pp. 41–42. Against: Sellwood, *JRAS* 1976 (above, n. 2), pp. 15–16.

242 (71/0 B.C.) and 243 (70/69 B.C.), and these fall within the limits of Phraates' III regnal years.

Outside of the hoard there are S39 drachms which bear 𐎧 and 𐎡 (or S.E. 244, 69/8 B.C.). The latter is a symbol which does not appear on S38. Waggoner also calls attention to a coin in Sellwood's collection, a S40 drachm bearing 𐎧 (illustrated in her article as fig. 10.) If these symbols are to be interpreted as dates we can conclude that certain examples of S38, S39, and S40 are contemporary. There is then numismatic evidence for the co-regency of Phraates III and Mithradates III (the minting authority of S40), suggested in Dio (36.14, cf. 39.56). Phraates, no doubt, would have taken advantage of the vacuum created by Pompey's success over Darius to establish Parthian control firmly in a recently unstable sector.

A conclusion may be drawn about the new symbols in S38 from "soft," subjective evidence. It appears that the same obverse engraver(s) produced dies for coins bearing these symbols. An example involves the two coins mentioned above. Compare, on Plate 23, the obverses of nos. 98, 108, and 109. It also seems that the same reverse engraver worked on these three coins.³³ If we accept Sellwood's suggestions that the "dates" are actually symbolic of mint personnel in Susa and that monogram 7 signifies Artemita, then serious questions have been raised about the mobility of Parthian mint personnel.

A final note: 25 of the 60 examples of S38 drachms in the catalogue bear monogram 3 or one of its many variants. If this monogram should signify coins struck for a military purpose or coins issued from a mint travelling with the king, then the numismatic record confirms what the historical record makes clear about the reign of Phraates III, that it was a time of extended campaigning against foreign threats.

The traditional attribution of S38 (and S39) to Phraates remains valid. The portraits of Phraates drawn from the numismatic and literary records are the same, and the proposed resolution of certain symbols into Seleucid era dates places these issues squarely within his reign.

³³ Sellwood, *JRAS* 1976 (above, n. 2), p. 23, yields similar results for reverse engraver "O." I should like to suggest that the three new monograms (nos. 6, 7, 8) are "special" in nature, as was suggested for monogram 3. Die cutters for the other monograms do not seem to have produced dies for these three, nor do die cutters producing for the three produce dies bearing any other monograms.

**S40. BASILEOS MEGALOU ARSAKOU DIKAIΟΥ EPIPHANOUS THEOU
EUPATOROS KAI PHILELLENOS**

**S41. BASILEOS BASILEON MEGALOU ARSAKOU DIKAIΟΥ EPIPHANOUS
THEOU EUPATOROS KAI PHILELLENOS**

An examination of the S40 and S41 drachms of the hoard leads to the conclusion that one minting authority struck both issues. The portraiture on the obverse is identical. The reverse inscriptions are identical save in one significant respect: on S41 the king is styled *Basileōs Basileōn Megalou*. My earlier observations on the increasingly grandiose titulature and the presence of monogram 6 on an S40 drachm indicate that S40 preceded S41. The mint condition of the S41s seen by the Iranian source and their relatively small number as evidenced in the catalogue suggest that S41 is the latest issue in the hoard and definitely ties together both issues chronologically.

The sampling of S40 (along with S41) reported was not smaller than the other issues in the hoard and the specimens in the catalogue bear the same monograms as earlier issues. The minting authority seems to have been ruling, or at least minting coins, at the same time as the minting authority of S38 (Phraates III). He enjoyed not a short reign,³⁴ controlled most, if not all, of the empire, but at some point found it necessary to clothe himself with a more grandiose title. The portrait emerging from numismatic evidence is the portrait of Mithradates III drawn from literary evidence. He began by supporting his father, Phraates, but ruled alone after parricide, and was ultimately deposed by his brother Orodes in a civil war.

A number of changes occurred in the monograms and symbols appearing on S40. Monogram 1 now appears with an additional symbol, beta, to the right of the archer's head (Plate 24, 113). Monogram 4 appears *above* the archer's bow (Plate 24, 125) and is the only monogram to do so. Monogram 9 appears for the first time in the hoard (Plate 24,

³⁴ It is uncertain how much of S40 is to be attributed to a period of co-regency. Mørholm attributes the entire issue to "Mithradates III as co-regent." The use of die engraver studies, although highly subjective, may be of value.

127), but it is uncertain for which mint it stands.³⁵ The last two changes are already present in S39 (compare S39/2–3 for the former, S39/18 for the latter), and offer additional connections between the coinage of Phraates and Mithradates.

The dynastic strife between the two sons of Phraates and the echoes of that strife in Parthian coinage have led to difficulties in interpreting the historical and numismatic records. Otto Mørkholm's astute observations on the nature of coinage issued during the civil war (in *NC* 1980) have clarified some misconceptions about Parthian history and coinage repeated by A. Simonetta.³⁶ The Kuh Dasht hoard is also instructive in this regard.

One should begin by noting that the silver coinage of S41 consists of *three* groups of coins. The tetradrachms of S41 (S41/1) form a "reconstructed" issue, i.e. all known examples were overstruck by Orodes II.³⁷ The reverse inscription of the undertype, rare in its mention of the king's personal name, indicates how unacceptable these coins were to the victorious Orodes: BASILEOS ARSAKOU EPIKALOUMENOU MITHRADATOU PHILELLENOS. S41/2–11 are the drachms whose reverse inscription appears at the head of this section and are represented by coins nos. 128–130. S41/12 is a rare type of drachm with an unusual reverse inscription.

Simonetta's first misconception holds that S41/2–12 are not to be attributed to Mithradates, but rather Phraates IV, a much later king.³⁸ The Kuh Dasht hoard evidence proves this clearly false. The S41s were in mint condition, covered with only a thin film of oxide. They are the last issue in a hoard whose coins have minting authorities from the early

³⁵ Compare S39/18; Sellwood *JNFA* 1975 (above, n. 2), p. 60, with Sellwood, *JRAS* 1976 (above, n. 2), where it is given to Kangavar, an assignation questioned by Mørkholm.

³⁶ A. Simonetta, "Notes on the Parthian and Indo-Parthian Issues of the First Century B.C." *Congrès international de numismatique, Paris, 6–11 juillet 1953*, vol. 2, *Actes*, pp. 111–21 and with Sellwood (above, n. 3).

³⁷ Mørkholm (above, n. 3), p. 38; H. Dressel "Ein Tetradrachmon des Arsakiden Mithradates III," *ZfN* 1922, pp. 156–77.

³⁸ A. Simonetta (above, n. 36), pp. 111, 116–17, and with Sellwood (above, n. 3), pp. 112–14, 116.

to mid-first century B.C., not the end of the first century B.C. To accept Simonetta's view we must assume that S42–49 are all missing, thereby creating an unacceptably large gap. The basic similarities of S40 and S41 drachms have already been discussed.

Simonetta, in 1953 and 1978, based his arguments in large part on the coin S41/12. The three known examples bear this crowded and complex reverse inscription:³⁹ above archer, BASILEOS / BASILEON right, ARSAKOU DIO· (?) / EUERGETOU below, PHRAATOU / EPIPHANOUS left, EPIKALOUMENOU / PHILELLENOS GOS (?). Simonetta read the problematic words DIO· and GOS as DIOS GOS resolving them into a date in the Seleucid era, October (Dios) 39 B.C., which falls within the reign of Phraates IV. In addition, the coin bears PHRAATOU. This interpretation is by no means certain.⁴⁰ We are assisted at this point by Mørkholm's observation that mint personnel felt the political pressures of civil war. On S44s the epithet Ktistes rendered the tetradrachms "neutral" in political content. S41/12 was struck in the same spirit. By reading Uos, not Gos, the king is labeled "son of Phraates." Either Mithradates or Orodes could be meant.⁴¹

S41/2–11 are to be attributed to Mithradates III. S41/12 is identical to these coins in portraiture but its reverse inscription marks it out as an example of "neutral" coinage issued during the civil war. The attribution of this issue to Phraates IV is wrong.

³⁹ The three examples are illustrated in the following: *BMC Parthia*, pl. 13, 13; Sellwood 1976 (above, n. 2), pl. 4, 108, and again, Simonetta and Sellwood (above, n. 3), fig. 2; Simonetta (above, n. 36), fig. 3. The portraiture is identical to S41/2–11. All three bear the same monogram (no. 3), but may be from different dies. The same obverse engraver produced nos. 1 and 2. The same reverse engraver produced all three, and is Sellwood's "O," a man creating dies for S39 and S40 coins. See Sellwood, *JRAS* 1976 (above, n. 2), p. 24.

⁴⁰ Sellwood reads DIOU (= Theou) and UOS (= Uios).

⁴¹ Most of Phraates' titulature is on these drachms, the inscription differing substantially from S41/2–11 and S42: DIO· (= Theou) EUERGETOU EPIPHANOUS PHILELLENOS (compare S39/1 and the drachms S38 and S39 without Theou). Simonetta (above, n. 36), p. 117, brings to bear a number of lesser arguments in his support. The most significant, which concerns the use of a w-shaped omega, is vitiated by an examination of coins 128–30 in the Kuh Dasht hoard.

Simonetta's second misconception is in his understanding of the internal situation in Parthia after the death of Phraates III.⁴² By assigning greater historical value to Dio's characterization of Mithradates as ruler of Media (39.56), and rejecting Justin 42.4, he believes that Orodes was the rightful heir, and that Mithradates unsuccessfully contested the throne. Numismatic and literary sources point to Mithradates as co-regent with his father, while he ruled Media for him. He would have been the elder son and thought to be competent enough to hold all Parthia eventually.

The western sources, Justin (42.4), Dio (39.56), and Appian (*Syr.* 51), all agree that Orodes deposed his brother. The overstruck S41 drachms support this. However, the particulars differ. Appian titles Mithradates as king of the Parthyaioi (his generic term for Parthian) in a summary of Seleucid history. Simonetta expects too much precision from Appian when he interprets Parthyaioi as the inhabitants of only Parthyene, a district name given by Isidore of Charax (*Parthian Stations* 12).

Dio attributes the death of Phraates to parricide and Orodes succeeds to the kingdom. The murderers fall out, and Orodes drives out Mithradates from Media, which he ruled. Dio's wording does not limit Mithradates to Media alone. The Parthian civil war is discussed in the context of the Roman Gabinius' operations in the East, and Roman policy is the focus. Dio looks ahead to Orodes' victory at Carrhae, the disastrous culmination of that policy Gabinius initiated: active involvement in the internal affairs of Parthia in his support for Mithradates after his expulsion (Dio 39.56, Josephus, *AJ* 14.103, App., *Syr.* 51). Orodes succeeds to the kingdom—Carrhae is foreshadowed; Mithradates is mentioned in connection with Media because Dio has already associated him with that region (36.14.2) and because he never successfully holds the empire in any case.⁴³ He is of interest to Dio only insofar as he has a direct bearing on Roman activity in the East (compare Josephus' treatment in *AJ*. 14.103 and *BJ* 1.178).

⁴² Simonetta (above, n. 36), pp. 114–16; (above, n. 13), pp. 16–17; with Sellwood (above, n. 3), p. 105.

⁴³ Note how Mithradates is identified in this passage: He is the *other* Mithradates, so as not to be confused with Mithradates VI of Pontus, Rome's enemy, and he is the son-in-law (gambros) of Tigranes of Armenia, another enemy of Rome. His relationship to Phraates, his own father, who is not a beligerent, is of no concern.

Justin's account differs: "Mithradates, rex Parthorum, post bellum Armeniae [here is the confusion with Mithradates II], propter crudelitatem a senatu Parthico, regno pellitur." He fled west to Babylonia (where he struck the S41 tetradrachms) and held out there until he cracked under the siege imposed by Orodes, who occupied the *regnum vacans*. Orodes enjoyed the support of the important eastern clan leader, the Suren (Plut., *Crassus* 21), who crowned Orodes before the assault against Seleucia.

To reconcile the sources and support Justin's validity, I begin with an inquiry into the phrase "senatu Parthico." This is an *interpretatio Romana* of what was apparently a council of nobles or clan leaders who acted in advisory capacity for the king. Justin 41.2 and Strabo 11.9.3 describe such a body, Strabo's account being significant because it is based on Poseidonius, a near contemporary of these kings. Tacitus, *Annales* 6.42 attests to the continued importance of nobles such as the Suren. That Mithradates was deposed by the "Parthian senate," or the nobles therein, is not an unreasonable statement.

What can be suggested? It would appear that in 57 B.C. Phraates III died under what were seen as mysterious circumstances. Charges of parricide were raised and believed, at least later by Dio (who saw in the east what was commonplace in the Roman Empire). Mithradates, already ruling Media, took the throne as heir. The Kuh Dasht hoard would support this. The S40s appear as a normal series of coinage within the hoard, sharing many of the characteristics found on earlier issues. Some in Parthia, including the Suren of Sistan and possibly other eastern clans, contested the succession, advanced Orodes as an alternate, and expelled Mithradates, perhaps on charges of parricide. Mithradates tried to gain Roman backing (Dio 39.56, Josephus, *AJ* 14.103). After he failed (App., *Syr.* 51) he attempted to use his own forces to make a stand in Babylonia (Justin 42.4).

The apparent contradictions in our sources can be attributed to a real civil war in Parthia which was poorly covered by western-oriented sources. Dio caused a major problem by seeming to fix Mithradates in Media alone. His reasons for doing so have been given above. Numismatic evidence illuminates the dynastic struggle. The overstruck tetradrachms with an undertype bearing Mithradates' name, the con-

fusing legend on S41/12, the re-introduction of *King of Kings*, harkening back to Mithradates II and belittling Orodes, all are testimony to civil strife and mint officials' uncertainty.

DATE AND CIRCUMSTANCES OF BURIAL

The mint condition of the S41 drachms and the political situation outlined above provide both date and circumstances of burial. Civil strife had begun to become a serious problem. S41 was minted with its grandiose titulature and circulated shortly before the hoard was put underground. In spite of the presence of a few Seleucid and very early Parthian issues, the hoard as we now have it is not a savings hoard. Most of the issues were in circulation at nearly the same time. These issues and the presence of commonplace jewelry⁴⁴ suggest an attempt to amass all one's valuables and get them underground in anticipation of an increasingly unstable political situation. On the basis of the hoard's content and the historical record the date for burial could be set at ca. 56–55 B.C. as in *IGCH*.

⁴⁴ The documented pieces are quite mundane: silver plaques and rings, nothing elaborate, nothing to allow for fixing in time and place of manufacture. Most pieces represent a frontally nude female, perhaps a goddess. Isidore of Charax reports temples of Artemis, Atargis, and Anais in the western sectors of the empire and in upper Media (*Parthian Stations* 1. 6). The simple nature of the jewelry suggests a collection of personal possessions. I am at a loss to say much more about the jewelry, but hope someone more familiar with it will comment on the pieces.

THE INITIAL COINAGE OF ALEXANDER JANNAEUS

(PLATE 26)

MARK D. MC LEAN

In 1967, Ya'akov Meshorer published his thesis that Alexander Jannaeus (103–76 B.C.), rather than John Hyrcanus I (135–104 B.C.), was the first Hasmonaean to issue coins, and suggested a relative chronology for Jannaeus' issues.¹ The present study concerns itself with a reordering of the coinage of Jannaeus based on consideration of the role of economic imitation in the establishment of a new coinage, the relative chronology suggested by a palaeographic analysis of the work of a specific engraver, implications of the shift from the use of *yhwnltn* to *ynltn*, as well as arguments tied to historical events.²

Meshorer has suggested the Anchor/Lily and Palm Branch/Lily³ series as the initial issues of Jannaeus on the basis of the lilies to be found

¹ Y. Meshorer, *Jewish Coins in the Second Temple Period*, trans. by I. H. Levin (Tel-Aviv, 1967).

² This article has been extracted from the study prepared for the American Numismatic Society's 1979 Graduate Seminar entitled "Chronologies for the Hasmonaean Coinage." Over 150 coins from the collections of the Society and David Hendin were subjected to palaeographic and numismatic analysis. This revealed the work of at least 10 engravers who worked on the Palaeo-Hebrew coins for the Hasmonaean rulers. The evidence gleaned from this study supports Meshorer's thesis that Alexander Jannaeus was the first Hasmonaean to issue coins.

³ The obverse and reverse designation follows convention and the Society's *SNG* format. However, the author feels that, both for standardization and in light of the nationalistic impulses behind the revival of Palaeo-Hebrew script on the Hasmonaean coins, the side bearing the Palaeo-Hebrew script should always be designated the obverse. See also the discussion below concerning the Anchor/Diadem and Anchor/Radiant coins.

on the prototypal coins of Antiochus VII and Antiochus VIII.⁴ Against this view is the argument that Seleucid coinage became increasingly scarce after 125 B.C. If indeed Seleucid coins had "dwindled almost to the vanishing point" 24 years earlier,⁵ attempts to establish the initial Hasmonaean issue in terms of direct economic imitation become difficult at best.

However, another possible answer to the disappearance of Seleucid coinage may be found in the suggestion that both the recall of the Anchor/Lily and Palm Branch/Lily series and the overstriking of Roman coins during the Second Jewish War (A.D. 132–35) find their precedent in a recall and exchange of Seleucid coins for Hasmonaean coins when Jannaeus took over the Seleucid mints and began issuing his coinage employing Seleucid symbols and fabric. If this is true, the only Seleucid coins which would remain would have been those in unrecoverable hoards, casual losses, and those few coins retained for one reason or another, much like the rare Anchor/Lily and Palm Branch/Lily coins which escaped recall. The recall would have provided Jannaeus with an immediate source of materials, and at the same time would have wiped out the hated signs of Seleucid domination. That such a recall could have been effectively carried out is proven by the Anchor/Lily and Palm Branch/Lily coins. Had the Anchor/Lily coins been recast rather than overstruck, we would have never known about the recall.⁶ This suggestion accounts for the scarcity of Seleucid coinage in Judaeian hoards after 125 B.C., the heavy dependence on Seleucid symbols in Hasmonaean coinage and the presence of a coin of Antiochus VIII possibly struck in Jerusalem and dated to 106 or 102 B.C.

Study of the anchors on the Palaeo-Hebrew Anchor/Diadem, the Aramaic Anchor/Radiant⁷ and the Anchor/Lily series reveals both direct

⁴ Meshorer (above, n. 1), pp. 57–58, and more recently "The Beginning of Hasmonaean Coinage," *IEJ* 24 (1974), pp. 59–61, where Meshorer publishes a bronze of Antiochus VIII dated year 20 (read as 102 B.C.) and assigned to Jerusalem on the basis of the lily reverse type. The attribution cannot be considered certain.

⁵ A. Ben-David, "When Did the Maccabees Begin to Strike Their First Coins," *PEQ* 104 (1972), pp. 98–100.

⁶ See below, n. 14.

⁷ See J. Naveh, "Dated Coins of Alexander Jannaeus," *IEJ* 19 (1968), pp. 20–25, and A. Kindler, "Addendum to the Dated Coins of Alexander Jannaeus," *IEJ* 18

imitation of the Seleucid anchor found on the coins of Antiochus VII (Plate 26, 1), as well as development in style. On the basis of this type feature, the Anchor/Diadem and Anchor/Radiant coins (Plate 26, 2–3) seem to be the earliest issues. The style of the anchors, as well as the lack of the solid circle around the anchor on the Anchor/Diadem coins, suggest a development from the Palaeo-Hebrew to the Aramaic series. Further development in the anchor style can be suggested by the more “refined” anchor found on the Anchor/Lily coins and the “imitation” Anchor/Radiant (Plate 26, 4–5) coins.⁸

The reverse of the Anchor/Diadem coins may also be seen as a testament to the initial stylistic borrowing by Jannaeus. The reverse type feature has been described as a “wheel,” a “star within a thick circle” and most recently as a “star within a diadem.”⁹ Well preserved coins clearly show that the band is a representation of the cloth diadem common in eastern monarchies and frequently gracing the heads of Seleucid monarchs appearing on coins (Plate 26, 6, Seleucus IV). Another common feature on such Seleucid coins from Antiochus IV onwards is the representation of the radiant head of the monarch (Plate 26, 7–8, Antiochus VI).

In a discussion with Frank M. Cross about the identification of the “star” and the presence of the diadem, Cross pointed out that he too had long wondered if the “star” with its center dot might not indeed be an abstract representation of the monarchical head employed by Jannaeus in deference to the Jewish reluctance to portray human figures. A study of the Anchor/Diadem and the Anchor/Radiant and the radiant head with diadem portrayed on Seleucid coinage makes this a strong possibility (Plate 26, 9–10). Again, a development from the Palaeo-Hebrew

(1968), pp. 188–91, for a discussion of these coins. These are the only dated Hasmonaean coins found thus far. The date of 78 B.C. is useful in considering the style of both the anchor and the radiant found on these coins, but should not be considered as the date of initial issue of this coin type.

⁸ A. Kindler, “The Jaffa Hoard of Alexander Jannaeus,” *IEJ* 4 (1954), pp. 173–74, suggests these coins were mainly for use in the “provinces” with the Palaeo-Hebrew coins struck and circulated in Jerusalem.

⁹ David Jeselsohn, “Hever Yehudim—A New Jewish Coin,” *PEQ* 112 (1980), p. 16; Kindler (above, n. 7), p. 172, nn. 2–6; and David Hendin, *A Guide to Ancient Jewish Coins* (New York, 1976), p. 15.

“Common Series” over Anchor/Lily

Anchor/Lily

Anchor/Diadem with its actual representation of the diadem, to the yet more abstracted Aramaic Anchor/Radiant with its encircling dots similar to those found on the Seleucid coins in question may be suggested. Of course, the decision cannot be based solely on this comparison of types. Fortunately, the remaining considerations do seem to support the hypothesis that the Anchor/Diadem series was Jannaeus' initial issue.

The palaeographic study of the coins and the use of the name *yhwntn* and *yntn* yield important information.¹⁰ We are fortunate that this study reveals to us an engraver who worked on all the Palaeo-Hebrew series issued by Jannaeus.¹¹ We find his work on the Anchor/Diadem coins using both *yhwntn* (Plate 26, 2) and *yntn* (Plate 26, 11), on the "common series" coins using *yhwntn* (Plate 26, 12), on the Anchor/Lily coins using *yhwntn* (Plate 26, 4), and on the common series coins using *yntn* overstruck on the Anchor/Lily coins (Plate 26, 13).¹² The switch from *yhwntn* to *yntn* by this engraver was merely a space saving device and had nothing to do with any religious qualms about the tetragrammaton.¹³ The use of *yntn* allowed the engraver to place just one letter between each ray of the star, rather than doubling the *ml* of *hmlk* and the *hw* or *wn* of *yhwntn* as required when the archaic spelling was employed (Plate 26, 11). The relative scarcity of Anchor/Diadem coins with *yntn* suggests our engraver hit upon this idea shortly before he began making the dies to be used to overstrike the Anchor/Lily series, and

¹⁰ *Yəhōnatan* and *yōnatan* are the same name. Inscriptional evidence has revealed the following development: *yahū* > **yaw* with the syncope of the intervocalic *h*; in the post-exilic period **aw* > *ō* in Judaea. In the Hasmonaean era both forms were pronounced *yōnatan*. See F. M. Cross and D. N. Freedman, *Early Hebrew Orthography* (New Haven, 1952), pp. 48, 57. Cf. H. Minc, "Yehohanan, the High Priest," *SAN* 8 (1977), p. 33.

¹¹ This refers to the coins found in the two collections used to prepare the initial study together with other published examples. Meshorer has spoken of series which do not appear in the Hendin or ANS collections and which have not yet been published.

¹² Fig. 1 gives the exact rendering of the Palaeo-Hebrew on the ANS and Hendin coins which are the work of Engraver I. For a detailed analysis of the characteristics and development of Engraver I's style see my paper on file at the ANS (above, n. 2).

¹³ Cf. the query by H. Minc on this point in "Some Rare and Unusual Jewish Coins," *SAN* 10 (1979), p. 13.

simply continued to use it on the new series.¹⁴ One would have expected *ywnln* in accordance with the plene orthography of the day. However, thus far the author knows of only two such common series coins.¹⁵ Again, this information in itself does not solve the problem, but acts as yet another pointer in the right direction as we turn to the question of historical events.

Why was the Anchor/Lily series overstruck and the Palm Branch/Lily series melted down?¹⁶ It had nothing to do with the use of *yhwntn* or *yntn*. If this were the case, one would expect all coins bearing *yhwntn* to have been recalled. Nor can it have had anything to do with the title "king" appearing in Palaeo-Hebrew.¹⁷ Once again, one would expect all the Anchor/Diadem coins to have been recalled. Rather, as Meshorer suggested in a conversation, someone for some reason did not like these

¹⁴ C. Lambert, "A Hoard of Jewish Bronze Coins from Ophel," *PEQ* 59 (1927), pp. 184–88, published four such coins. The ANS has one (Plate 26, 11).

¹⁵ Both in the Minc collection, one of which he published (above, n. 13), p. 14.

¹⁶ We are fortunate that the decision was made to overstrike the Anchor/Lily coins rather than to recast them. Meshorer believes that the great number of overstruck coins in relation to those few which were missed in the recall suggests this was an extensive issue, far too great to have been stored at the mint and then overstruck prior to issue (conversation of 25 July 1979). Had the Anchor/Lily coins been melted down as the Palm Branch/Lily coins seem to have been, we might have been locked forever into the erroneous conclusion that this was a rare "limited special edition" rather than the extensive issues the overstriking reveals them to have been.

¹⁷ Opposition to the use of the title "king" by the Hasmonaeans often has been suggested, see Joseph Meyshan, "Jewish Coins in Ancient Historiography," *PEQ* 96 (1964), p. 49. Such arguments have missed the true point of contention. As a reading of Josephus (*AJ* 13.10.5–7; 13.13.5 and *BJ* 1.2.8; 1.4.4–6) and a recognition of the struggle for power between the priestly houses, especially as highlighted in the Qumran writings, indicate, the real problem was the usurpation of the office of High Priest by the Hasmonaeans and the displacement of the legitimate Zadokite house. Even when Josephus speaks directly to the opposition of the "nation" to being ruled by a king, the reason for the opposition was that "it was the custom of their country to obey the priests of the God who was venerated by them..." (*AJ* 14.3.2). Surely, the Hasmonaeans had not failed to understand that the source of their authority was the office of High Priest. For a discussion of the priestly rivalry and parties in Judaea at this period see F. M. Cross, "The Early History of the Apocalyptic Community at Qumran," *Canaanite Myth and Hebrew Epic* (Cambridge, Mass., 1973), pp. 326–46; and Paul D. Hanson, "The Origins of the Post-Exilic Hierocracy," *The Dawn of the Apocalyptic* (Philadelphia, 1975), pp. 209–79.

series and wanted them obliterated. If the recall of the Anchor/Lily and the Palm Branch/Lily was a move to placate the Pharisees, it is possible that these coins were somehow connected with an event that raised bitter memories among the Pharisees. E. W. Klimowsky has shown that the palm branch, among other things, was a symbol of victory in Hasmonaean times.¹⁸ Jannaeus had any number of victories he might have commemorated, but the end of the six year civil war in 88 B.C., crowned as it was by the crucifixion of 800 of Jannaeus' enemies, as well as the slaughter of their wives and children as they hung there waiting to die, draws one's attention.¹⁹ If these series were somehow connected with this event and the end of the civil war, whether on purpose or by simple accident of timing, they would have invoked many bitter memories.²⁰ A date of 88 B.C. allows enough time for these originally large issues to have been struck, recalled and overstruck or melted down prior to the end of Jannaeus' reign.

Overall, the evidence seems to point away from the Anchor/Lily and the Palm Branch/Lily series and toward the Anchor/Diadem series as the initial issue. Still one must ask where the common *yhwtn* series fits into the scheme.

The idea of a joint issue with the Anchor/Diadem series is possible, but until further evidence is available, it is probably best to suggest the common series began shortly after and continued to be struck concurrently with the Anchor/Diadem. The title of High Priest was of vital importance to the Hasmonaeans. This office was the major source of their authority. Josephus reports that, in the reigns of both John Hyrcanus I and Alexander Jannaeus, the suggestion that the ruler was unfit to be High Priest and should content himself with governing the nation led to bloodshed.²¹

¹⁸ "Symbols on Ancient Jewish Coins," *The Date and Meaning of Ancient Jewish Coins and Symbols* (Jerusalem, 1958), p. 89. Cf. Paul Romanoff, *Jewish Symbols on Ancient Jewish Coins* (Philadelphia, 1944), pp. 16–19.

¹⁹ Josephus, *AJ* 13.14.2.

²⁰ Josephus related that once the Pharisees came to power under Alexandra they began to murder the supporters of Jannaeus in the streets (*AJ* 13.16.2). Actually, the symbolism of the Palm Branch matters little if these coins were connected with the end of the civil war, whatever the original reason and symbolism behind their issue.

²¹ Josephus, *AJ* 13.10.5–7; 13.13.5 and *BJ* 1.2.8; 1.14.4–6.

The following summary of the initial issue of coins by Alexander Jannaeus and a relative chronology of the remaining issues is suggested by the above analysis and the full paleographic study of the Hasmonaean coins in the American Numismatic Society and in the Hendin collections.

- ca. 100 B.C.²² The Anchor/Diadem and the common *yhwtn* were issued, either jointly, or with the latter following shortly after the former and continuing concurrently. The relative scarcity of Anchor/Diadem coins with *yntn* suggests this was a later development occurring slightly before the recall of the Anchor/Lily and the Palm Branch/Lily series.
- ca. 95 B.C. The Anchor/Radiant series and its variations began to be issued for use in the provinces. Some time after 95 B.C., the lead coins with Aramaic inscriptions and the small anchor in the solid circle began to be struck.
- ca. 88 B.C. The Anchor/Lily and the Palm Branch/Lily were issued in celebration of the successful conclusion of the civil war.
- ca. 79 B.C. In a move to placate the Pharisees, the Anchor/Lily and Palm Branch/Lily series were recalled. The Anchor/Lily coins were overstruck using common *yntn* dies cut by engraver I.

²² The date of ca. 100 B.C. may be a little too early if Meshorer's attribution and date are correct for the coin of Antiochus VIII (above, n. 3).

CARACALLA OR ELAGABALUS?
THE IMPERIAL IMAGO AT THE GREEK MINT
OF MAGNESIA AD MAEANDRUM

(PLATES 27–28)

KENNETH W. HARL

At dawn on the sixteenth of May 218, a crowd of legionaries, auxiliaries and civilians gathered at Raphanea hailed as emperor the boy-priest of Emesa's sun, Varius Avitus Bassianus, and the new ruler adopted the full titulature Imperator Caesar M. Aurelius Antoninus Pius Felix Augustus.¹ The new emperor's grandmother, Julia Maesa, had carefully staged the dramatic scene and within six weeks restored the fortunes of the Severan house. Besides lavish bribes and promises coaxing soldiers and populace to receive her grandson as the true heir to Caracalla, she also had fed the soldiers the rumor that Elagabalus was the illegitimate son of their darling Caracalla.² The story was plausible because, apparently, Elagabalus did bear some resemblance to his cousin Caracalla.³ Julia Maesa's propaganda proved so effective that sorting out the official documents of Caracalla and Elagabalus has produced more than a few scholarly headaches. The pitfalls of mistaking Caracalla for Elagabalus (or vice versa) are nowhere more evident than in the field of "Greek imperial" coins.

¹ *SHA Macr.* 9.1–6, *SHA Elag.* 1.4–7; Herodian 5.3.9–12 and Dio 78.30.2–31.4. For chronology see *RE* 18, s.v. "M. Opellius Macrinus," cols. 540–43 (Petrikovits).

I give my deepest thanks for the assistance and photos sent by Sabine Schultz. My special thanks also to William E. Metcalf, Ramsay MacMullen, Naphtali Lewis, J. J. Pollitt, Christopher Howgego and John J. Phillips.

² Herodian 5.3.10; *SHA Car.* 9.2, *Macr.* 9.4, 14.2 and 15.2, and *SHA Elag.* 1.4; Dio 78.31.3 and 32.2–3. For his name on coinage, see *BMCRE* 5, pp. ccxxxi–ccxxxii.

³ Dio 78.32.2.

Sabine Schultz has recently published an admirable catalogue of coins minted by the Ionian city of Magnesia ad Maeandrum during the imperial age.⁴ Magnesian coins bearing the name of M. Aurelius Antoninus have long been confused between Caracalla and Elagabalus, and, in general, few sound criteria have been established for distinguishing the civic coins of Caracalla from those of Elagabalus.⁵ Schultz lists 29 obverse dies with the name M. Aurelius Antoninus and attributes 25 of these to Caracalla. She subdivides 19 of the 25 obverse dies attributed to Caracalla into three successive groups of portrait busts, as follows.⁶

- Group 1 (8 dies): Obverse dies 1, 3, 6, 6A, 6B, 9, 12 and 13. These are the earliest issues showing a young bust of the emperor, beardless and styled AVT(O)KPATΩP = IMPERATOR. The coins are dated by Schultz, to 198–204.
- Group 2 (6 dies): Obverse dies 2, 10, 14, 17, 18 and 20. These busts also portray a young emperor, but with a sprouting beard and slightly more mature features. The group also is dated to 198–204, but after Group 1.
- Group 3 (5 dies): Obverse dies 4, 5, 8, 11 and 12A. These busts show the unmistakable mature, brutish features of Caracalla with a full beard, and are dated to 209–17.

Schultz also notes four “atypical” portraits (obverse dies 7, 10A, 16 and 16A) which she hesitates to date and she does not classify two

⁴ See S. Schultz, *Diz münzprägung von Magnesia am Mäander in der römischen Kaiserzeit* (Hildesheim, 1975), hereafter cited as Schultz.

⁵ See remarks of A. Abaecherli-Boyce, “Caracalla as Severus,” *ANSMN* 8 (1958), pp. 81–98. For confusion over Magnesia’s coins with the name of M. Aurelius Antoninus, note that *SNGvAulock* 2051 (= Schultz, no. 162), 2052 (= Schultz, no. 168) and 2053 (= Schultz, no. 178); *SNGFitz* 4519 (= Schultz, no. 178) were all attributed to Elagabalus until Schultz reassigned them to Caracalla. See, however, O. Kern, *Die Inschriften von Magnesia am Maeander* (Berlin, 1900), pp. xxiv–xxv, and “Be-amtenamen,” rev. ed., p. 95, who attributed all eponymous coins in name of M. Aurelius Antoninus to Caracalla.

⁶ See Schultz, pp. 29–30.

obverse dies (15 and 19), though the features and fairly thick beard would mark them as later busts⁷ (see Plates 27–28 and Table 5, below, p. 178).

This scheme for the coinage of M. Aurelius Antoninus leaves few coins minted at Magnesia for Elagabalus of which one bears a young portrait; the rest, depicting him with whiskers, are classified as later issues, 220–22.⁸ Her classification of the coins of M. Aurelius Antoninus is based upon the general appearance and style of the obverse dies. A close examination of the dies of the youthful Caracalla and of Elagabalus is, unfortunately, inconclusive. Portraits of Caracalla's Group 1 and 2 busts show many general similarities in features, but it is not clear which M. Aurelius Antoninus any particular die is intended to depict. Schultz has applied her stylistic distinctions without giving sufficient consideration to the process by which a die came to be as well as the evidence furnished by the names of local magistrates on the reverses of most larger denominations.

We have, unfortunately, neither inscriptions nor literary sources which shed any light upon what authority provided local die cutters with portrait models (*laureatae imagines*) or titulature for each new emperor. Schultz notes that Magnesia obtained many of her dies from, or more accurately in my view, employed the same engravers as, the "Ephesian" workshop.⁹ Even if we accept the Kraft theory of centralized workshops, which would simplify the process, inaccurate portrait busts and peculiarities in imperial titulature turn up on Greek imperial coins for a number of emperors. For example, several Anatolian cities, upon learning of the proclamation of Valerian and Gallienus, issued coins for both emperors, but the junior partner Gallienus was rendered beardless and with the title Caesar.¹⁰ The coins were, in all probability,

⁷ See Schultz, pl. 13, 203, and 13, 209.2 for examples of unclassified obverse dies 15 and 19.

⁸ See Schultz, p. 30, and no. 224–25 for obverse die 4, the young bust of Elagabalus.

⁹ See Schultz, pp. 16–17, and K. Kraft, *Das System der kaiserzeitlichen Münzprägung in Kleinasien* (Berlin, 1972), pp. 29–35.

¹⁰ At Ephesus, see *ZfN* 12 (1885), p. 318, no. 9, which styles him as ΓΑΛΛΙΗΝΟΚ. At Nysa, see *BMCLydia*, pp. 185–86, nos. 74–79, *SNGCopLydia* 332–34, *SNGvAulock* 3055–56 and *SNGFitz* 4908, and at Tralles, see *BMCLydia*, p. 361, nos. 203–4, *SNGCopLydia* 706–11 and *SNGvAulock* 3298–99 and 8289 for ΠΟ ΛΙΚΙΝΝ ΓΑΛΛΙΗΝΟΚ K.

the work of a single engraver who was drawing upon the earlier pair, Trebonianus Gallus and Volusian as models for the new imperial team. Other mints correctly named Gallienus as Augustus, but still show him as a beardless youth.¹¹ At such important centers as Nicomedia and Tarsus, die cutters employed identical obverse busts for Valerian and Gallienus and distinguished them by applying the appropriate imperial titles.¹² Short cuts and blunders are not restricted to Valerian and Gallienus. There are the well known cases of Pitane using the personal name of Berissimus for Marcus Aurelius and Ceretapa Bassianus for Caracalla.¹³ Three dies employed at three Lydian towns, apparently the work of one die cutter, rendered Plautilla as Plautiana, a feminine form invented from her father's name, while later a die cutter operating for a number of cities bungled Salonina as Chrysogone.¹⁴ On coins of Pisidian Antioch the names of Volusian and Valerian are meaningless jumbles of letters and their portraits are virtually indistinguishable.¹⁵

It should also be noted that local die cutters from Augustus on had not aimed for the same realism as their contemporaries at Rome.¹⁶ Their

¹¹ See at Nicomedia, *SNGvAulock* 7142–47; at Lydian Tripolis, *SNGvAulock* 3326; at Hierapolis, *SNGvAulock* 3669; at Corcyus, Cilicia, *SNGvAulock* 5688; at Syedra, Cilicia, *SNGvAulock* 5905; at Tarsus, *SNGFitz* 5348 and *SNGCopCilicia* 410 and at Neocaesarea, Pontus, *RGA*², vol. 1, p. 131, no. 74, and *SNGCopBosphorus* 200.

¹² Compare *SNGvAulock* 7135–37 (Valerian) to 7142 (Gallienus) and compare 7139 (Valerian) to 7143 (Gallienus) at Nicomedia. At Tarsus, compare *SNGvAulock* 6077 (Valerian) to *SNGFitz* 5348 (Gallienus) and *SNGCopCilicia* 408 (Valerian) to 410 (Gallienus).

¹³ For Marcus Aurelius, see *BMCMyisia*, p. 173, no. 19: AVPH KAICAP BHPICIMOC. For Caracalla, see *ZfN* 1890, p. 20, and pl. 2, 12: AVT KAI M AVAN BACCIANOC. Both names are attested in literary sources; see *PIR* I², p. 120, no. 687, and *RE* 2, s.v. "M. Aurelius Antoninus," col. 2435, respectively.

¹⁴ For Plautilla, see Kraft (above, n. 9), p. 52, and pl. 71, 63a (Acrasus) and 63b (Thyatira); pl. 71, 66 (Acrasus) and pl. 71, 67 (Hypaepa). For Salonina, see Kraft, p. 95.

¹⁵ See B. Levick, "The Coinage of Pisidian Antioch in the Third Century A.D." *NC* 1966, pp. 49–50.

¹⁶ See M. Grant, *From Imperium to Auctoritas: A Historical Study of the Aes Coinage in the Roman Empire, 49 B.C.–A.D. 14* (Cambridge, 1946), pp. 328–30, and D. J. MacDonald, *Coins from Aphrodisias*, BAR Supp. Series 9 (Oxford, 1976), p. 26.

coinage was for a Greek audience long accustomed to more idealized or even stylized depictions of their rulers. Although first century civic coins yield instances where portraits imitated those found on contemporary imperial coins, civic coins show growing stylization and linear treatment of obverse busts, reverse figures and letter forms.¹⁷ In the later third century, a linear, stylized approach became quite prevalent, perhaps in part because it would facilitate the engraving of dies by a Greek city hard pressed to keep track of the names, let alone the faces, of each new all-saving emperor.

In sum, errors and shortcuts should warn us that die-sharing among Anatolian cities need not imply a tightly supervised network promptly delivering to engravers the imago of each emperor. However Magnesia secured her dies, we cannot be sure how accurately the engravers were informed about the emperor's likeness. The confusion between Caracalla and Elagabalus could result from deliberate stylization, ignorance of the features of Elagabalus which could lead to copying a younger version of Caracalla as the closest approximation of the new M. Aurelius Antoninus or because the features of the two imperial cousins were so similar. In any case, the style of obverse portraits alone is insufficient and we are required to turn to other evidence.

Unfortunately, the smaller *aes* in the name of M. Aurelius Antoninus are devilishly difficult to identify because they lack eponyms or topical scenes on their reverses, forcing us to depend solely on the portrait bust. On the other hand, the reverses of many larger coins, Schultz's denominations six and five, bear the names of eponymous magistrates which can assist in identifying M. Aurelius Antoninus. As an aid in that endeavor, a list of all eponyms appearing on coins from Septimius Severus through Elagabalus, as classified by Schultz, is presented in Table 1.

¹⁷ See Kraft (above, n. 9), pp. 15–19, for stylistic evolution. For civic *aes* imitating imperial issues in the Julio-Claudian period, see Grant (above, n. 16), pp. 467–68, and W. Trillmich, *Familienpropaganda der Kaiser Caligula und Claudius* (Berlin, 1978), pp. 132–36. For the Severan period, see A. Johnson, "Review-Article: New Problems for Old: Konrad Kraft on Die-Sharing in Asia Minor," *NC* 1974, p. 204.

TABLE 1

Eponyms Appearing on Coins Issued at Magnesia from 193 to 222

<i>Obverse:</i>	<i>Reverse:</i>
Septimius Severus	Onesimus (Schultz no. 142, 148) Gratus (143) M. . . (144) . . . son of Eutychion (145) Pallianus (147)
Julia Domna	Flavius Bassus (153) Eponym illegible (152)
Geta	Aurelius Tatianus (214) Gratus (216)
Caracalla, Group 1	Onesimus (158) Aurelius Aristocles (161, 174, 175) M. Aurelius Hyllus (162, 176, 177, 187) M. Aurelius Philoumenus (164, 168, 178, 188) Secundus (165, 166, 182-186) M. Aurelius Euboulus (172) . . . son of Eutyches (181) . . . son of Soticus (189)
Caracalla, Group 2	None
Caracalla, Group 3	Aurelius Aménarus (163) M. Aurelius Ameptus (167) Demonicus (179) Flavius Bassus (180)
Caracalla, Atypical	Secundus (173)
Elagabalus	None
Julia Maesa	M. Aurelius Hyllus (229, 230) Flavius Terentius (231) M. Aurelius Philoumenus (232) M. Aurelius Euboulus (233, 234) Secundus (235)

The names of 12 magistrates, all of them *grammateis*, survive on coins Schultz attributes to Caracalla.¹⁸ Eight of these men are named on reverses of coins whose obverse die belongs to Group 1; the other four,

¹⁸ Schultz, pp. 23-24, 30 and 70-76.

to Group 3. One of the men named on a Group 1 coin also is named on a coin classified as "atypical." No names appear on coins with Group 2 busts.¹⁹

The eponyms on Group 3 busts are associated with obverse dies portraying a mature, bearded M. Aurelius Antoninus, which clearly depict Caracalla, not Elagabalus.²⁰ Two of the magistrates, Demonicus and Flavius Bassus, share obverse die 8 of Caracalla, suggesting that they either held the secretaryship together or in succession sometime during the sole reign of Caracalla.²¹ Flavius Bassus is also named on a coin depicting an elderly Julia Domna, while the name of Demonicus might possibly be restored to another coin of Julia Domna with a similar older bust.²² The coins of Aurelius Aménarus and M. Aurelius Améptus share obverse die 4 and belong together, though it is uncertain whether or not their coins form an issue separate from those of Flavius Bassus and Demonicus.²³ Absence of these four names from the surviving coins of Septimius Severus, Geta and Plautilla point to a date after 212, quite possibly 214–17 during Caracalla's Parthian campaign.²⁴

The evidence of eponyms associated with Group 1 busts is more complex. Only Onesimus, out of the eight *grammateis*, is also named on

¹⁹ It should be noted that except for obverse die 2, all other Group 2 bust obverse dies are for small denomination coins on which eponyms are omitted due to the constraints of space. Note Schultz, p. 72, describes a coin with the eponym ΕΠΙ ΓΡΑ ΑΥΡ ΑΠΟΛΛΩΝΙΟ (= Hirsch 25, Nov. 29, 1909, 2163), but assigns no number and cannot identify either the obverse or reverse die. See Schultz, p. 128, no. 58, for an uncertain coin of a magistrate Primus.

²⁰ See Schultz, pl. 12, 167 (V. 4) and 180 (V. 8).

²¹ Schultz, no. 179 and no. 180.

²² For Flavius Bassus, see Schultz, no. 153, and compare similarities of eponym and type no. 189 (Caracalla). Coin no. 152 (Julia Domna) bears the incomplete eponym ΕΠΙ ΓΡΑ . . . and the reverse type of Leto, which is very similar to Caracalla's coin no. 179 showing the name Demonicus. It is not unreasonable to restore Demonicus as the eponym for no. 152. For Domna's obverse bust, see pl. 11, 152 (V. 1) and 153 (V. 2), which Schultz (p. 29) would date before A.D. 213 on the basis of coiffure.

²³ See Schultz, nos 163 and 167.

²⁴ For activity of civic mints in 214–17, see T. B. Jones, "A Numismatic Riddle: The So-called Greek Imperials," *Proceedings of the American Philosophical Society* 107 (Philadelphia, 1963), pp. 332–33.

coins of Septimius Severus, and, in fact, the reverse die naming Onesimus on a coin of M. Aurelius Antoninus is also combined with an obverse die of Septimius Severus.²⁵ Without question the coins of Onesimus naming M. Aurelius Antoninus are intended to represent Caracalla. The unknown son of Eutyches, whose full name is not legible, appears on a coin of M. Aurelius Antoninus and he is tentatively identified by Schultz as the son of Eutycheon named on a coin of Septimius.²⁶ Since both legends lack the name and provide different patronymics, the identification of the son of Eutyches as the same man as the son of Eutycheon need not, and probably should not, be accepted without further evidence. None of the six remaining magistrates (Aurelius Aristocles, M. Aurelius Euboulus, M. Aurelius Philoumenus, M. Aurelius Hyllus, Secundus and the son of Soticus) appears on coins minted for other members of the family of Caracalla. Quite peculiarly, four of them are named on coins of Julia Maesa: Secundus, Euboulus, Philoumenus and Hyllus. Schultz resolves this paradox by concluding that these four men, as a group repeated in 218–22, an office they had held together in 198–204.²⁷ If, however, we tabulate the combinations of obverse dies used with reverse dies bearing the names of eponymous magistrates assigned by Schultz to 198–204 and to 212–22, the results are quite illuminating.

It is clear from Table 2 that Onesimus' coinage for M. Aurelius Antoninus shares no obverse die with any other magistrate and his name is not repeated on coins of Julia Maesa. Instead, as noted earlier, the reverse die naming Onesimus on the coin of M. Aurelius Antoninus is shared by a coin of Septimius Severus. In addition, obverse die 1 of M. Aurelius Antoninus was employed with reverses which name no eponymous magistrates but celebrate *homonoia* between Ephesus and Magnesia. This event also is commemorated on coins of Septimius Severus and Geta, as well as on a Group 2 bust coin of M. Aurelius Antoninus. Die links, the *homonoia* reverse theme, and eponyms associate, probably as a single

²⁵ See Schulz, p. 67, no. 142 (Septimius Severus), and p. 70, no. 158 (Caracalla).

²⁶ See Schultz, no. 145 (Septimius Severus) and no. 181 (Caracalla), plus comments on pp. 29–30.

²⁷ Schuitz, p. 30.

TABLE 2

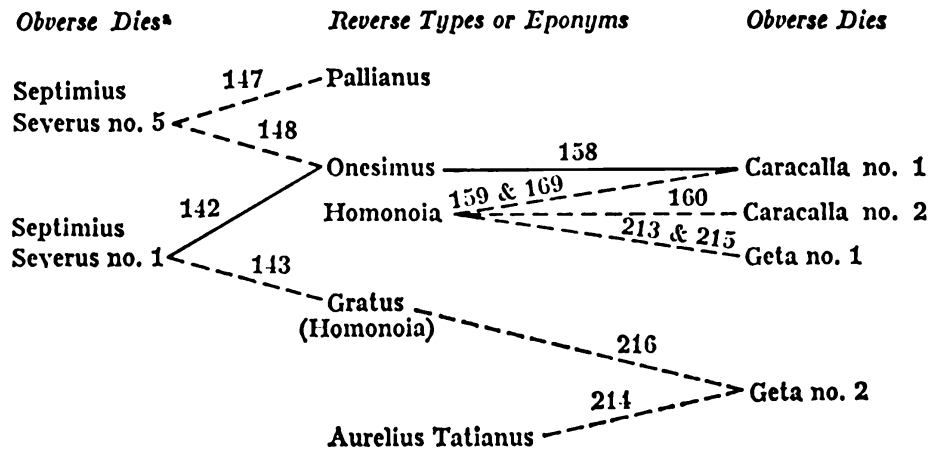
Combinations of Obverse Dies with Reverse Dies
Bearing Eponyms Assigned by Schultz
to 198–204 and to 218–22

<i>Obverse</i>	<i>Reverse</i>
<i>M. Aurelius Antoninus</i> ("Caracalla"):	
Group 1, die 1	Onesimus (Schultz no. 158)
Group 1, die 3	M. Aurelius Philoumenus (164, 168) M. Aurelius Hyllus (162) Aurelius Aristocles (161) Secundus (165, 166)
Group 1, die 6	M. Aurelius Philoumenus (178, 188) M. Aurelius Hyllus (176, 177, 187) Aurelius Aristocles (174) Secundus (182, 184–186) M. Aurelius Euboulus (172) . . . son of Soticus (189)
Group 1, die 6A	Aurelius Aristocles (175) Secundus (183) . . . son of Eutyches (181)
Group 1, die 6B	M. Aurelius Hyllus (177)
Atypical, die 7	Secundus (173)
<i>Julia Maesa</i> :	
Group 1, die 1	M. Aurelius Hyllus (229, 230) M. Aurelius Euboulus (233, 234) Secundus (235)
Group 2, die 2	Flavius Terentius (231)
Group 1, die 3	M. Aurelius Philoumenus (232)

issue, coins using obverse dies 1 and 5 of Septimius Severus, obverse dies 1 and 2 of Geta and obverse dies 1 and 2 of M. Aurelius Antoninus now identified as Caracalla, as shown on Table 3.

TABLE 3

Relationship of Caracalla Obverse Dies 1 and 2
with Coins of Septimius Severus and Geta



*Die and coin numbers are those of Schultz. Solid lines denote shared dies; broken lines denote similar reverse types or the same eponyms shared.

This classification would suggest that Onesimus was a colleague of three other men: Pallianus, named on coins of Septimius Severus; Aurelius Tatianus, named on coins of Geta; and Gratus, named on coins of both Septimius and Geta. Since Geta, on these coins, is styled as Augustus, the issue should belong to the years 209–11, i.e. after Geta's elevation to Augustus and before the death of Septimius, and not to 198–204 as implied by Schultz' classification based on the style and appearance of Caracalla's bust.

Let us, however, return to the more puzzling point, the remaining seven magistrates found on Group 1 bust coins of M. Aurelius Antoninus. Die links among these seven magistrates, as shown in Table 2, would suggest that they held office and coined simultaneously rather than successively. All four men named on the reverses of coins employing obverse die 3 appear in conjunction with obverse die 6. Aurelius Aristocles connects dies 3, 6 and 6A; Secundus connects 3, 6, 6A and 7 and Hyllus connects, 3, 6 and 6B. This relationship is illustrated by Table 4.

TABLE 4

Relationship of Select Obverse Dies
of M. Aurelius Antoninus with Reverse Eponyms

<i>Obverse Die 3</i>	<i>Obverse Die 6</i>	<i>Obverse Die 6A</i>	<i>Obverse Die 6B</i>	<i>Obverse Die 7</i>
M. Aurelius Philoumenus	M. Aurelius Philoumenus	—	—	—
M. Aurelius Hyllus	M. Aurelius Hyllus	—	M. Aurelius Hyllus	—
Aurelius Aristocles	Aurelius Aristocles	Aurelius Aristocles	—	—
Secundus	Secundus	Secundus	—	Secundus
—	M. Aurelius Euboulus	—	—	—
—	Son of Soticus	—	—	—
—	—	Son of Eutyches	—	—

In short, it seems that we are dealing with a commission of at least seven men or perhaps several smaller teams of two or three magistrates who shared obverse dies in succession. Four of the seven, as noted previously, also are named on coins of Julia Maesa. It seems likely that at least three of the five *grammateis* whose names appear on the coins of Julia Maesa, those who share her die no. 1, coined simultaneously, and perhaps the other two coined as part of the same board. Although the details of the operation of the *grammateis* are lost to us, the coinage indicates that we have a commission of at least seven men for M. Aurelius Antoninus and perhaps as many as five for Julia Maesa. This arrangement is the norm for eponymous issues at Magnesia for Severus Alexander and later emperors. In particular, the seven magistrates named on coins under Maximinus and the twelve named under Gordian III are so closely associated by obverse die links that it is impossible for the magistrates

during these short reigns not to have formed a board or group of boards.²⁸ Similar commissions can be demonstrated at other mints of Asia as well.²⁹ If this is so, then is it likely that the same four men coined for Caracalla ca. A.D. 200 and then nearly 20 years later constituted part of another commission for Julia Maesa?

There are instances where two separate issues of coins bear the name of the same magistrate. These examples, however, involve a single individual and usually there is a relatively short lapse of time between his first and second tenure of office.³⁰ Two examples come from Magnesia. An Aurelius Tychicus coined for both Severus Alexander and Maximinus, but this could be during one term of office in the year 235.³¹ Photinus who issued under Severus Alexander perhaps reappears on coins of Gordian III, though this pair of names could very well represent a father and a son.³² The coincidence of four names appearing on Magnesia's issues for Caracalla and Julia, separated by two decades, is not impossible but it is improbable. The improbability increases when we consider that none of the seven men assigned to Caracalla's issues of 198–204 repeated his office on the eponymous issues which have been reattributed, to 209–11 and 214–17. The repetition would come only in 218–22 after a suspiciously long interval. The eponyms reveal two other points. Three of the magistrates—Hyllus, Euboulus and Philoumenus—and perhaps a fourth, Aristocles, bear the praenomen and nomen M. Aurelius, which suggests, though by no means proves, that they were beneficiaries of the *Constitutio Antoniniana* of 212. The slender prosopographical information offered by inscriptions and non-Severan coins at Magnesia would strengthen this hypothesis because only one usage of M. Aurelius

²⁸ See below, Appendix 1.

²⁹ For analogous examples at Nysa and Tralles, see K. Regling, "Nysa ad Maeandrum," *JDAI*, *Erganzungsheft* 10 (Berlin, 1913), pp. 85–90, and "Beamtennamen," rev. ed., pp. 153–54.

³⁰ See below, Appendix 2.

³¹ See Schultz, nos. 236, 240 and 242–43 (Severus Alexander) and nos. 289, 301 and 304 (Julia Mamaea) and compare nos. 316, 319, 321 (Maximinus) and nos. 338 and 350 (Maximus).

³² See Schultz, nos. 296 and 299 (Julia Mamaea) and compare nos. 406, 428, 430, 435 and 451 (Gordian III) on which Photinus is styled TO B'.

can be documented before 212.³³ Finally, and this is the decisive point, the eponym for M. Aurelius Philoumenus states quite clearly, both on his coins bearing the name of M. Aurelius Antoninus and those of Julia Maesa, that he held the secretaryship for the second time: *ἐπι γρ. Μ. Αὐρ. Φιλονόμενον τὸ β'.*³⁴ If Philoumenus coined for both M. Aurelius Antoninus and Julia Maesa in the same year, then his term of office dates to 218 or later, because no coins of Julia Maesa were ever issued prior to the accession of Elagabalus. Here, therefore, M. Aurelius Antoninus turns out to be not Caracalla, but Elagabalus. If this is so, then the other six magistrates associated with Philoumenus through obverse die links, three of whom are also named on Maesa's coins, struck their coinage in the name of M. Aurelius Antoninus for Elagabalus.

This proposed reattribution offers an advantage in understanding Magnesian eponyms. According to Schultz, no eponymous coinage survives for Elagabalus while, oddly enough, five names turn up on his grandmother's coins.³⁵ This contrast is all the more unusual when one considers that from Severus Alexander to Philip I, individuals serving as *grammateis* are consistently named on at least some of the larger *aes* for all members of the imperial family.³⁶ Schultz's classification implies that a large committee or a succession of magistrates coined during 198–204 for Caracalla alone, and not for his entire family, as we might expect. But if these magistrates are removed from Caracalla's reign altogether and if its members are recognized as members of a board (or boards) striking both for Elagabalus and Julia Maesa, the evolution of eponymous signatures on the coinage of Magnesia looks much more plausible. It is with

³³ The one documented example probably is Aurelius Tatianus named on a coin of Geta (redated above to 209–11); see Schultz, no. 214. See Schultz, pp. 24–26, for six eponymous magistrates on coins from Severus Alexander to Philip with the *nomen* Aurelius. See Kern (above, n. 5), no. 119, on which 15 names, all M. Aurelii, are listed as cult magistrates, but no date can be restored. See Kern, no. 197, a dedication to Caracalla (212–17) erected by five magistrates, four of whom are M. Aurelii. See also the remarks in D. Hagedorn, "Marci Aurelii in Ägypten," *Bulletin of the American Society of Papyrologists* 16 (Missoula, 1979), pp. 47–59.

³⁴ See Schultz, nos. 165, 168 and 188 (Caracalla), and compare to no. 232 (Julia Maesa).

³⁵ See Schultz, nos. 224–26 (Elagabalus), and nos. 227–35 (Julia Domna).

³⁶ See Schultz, pp. 24–25 and 84–123.

Elagabalus for certain, if not earlier in the proposed reclassification of issues to 209–11 and 214–17, that Magnesia regularly names on coins the board of *grammateis* responsible for an issue.

Several further points should be made. First the weights of the coins are consistent with others during the reign of Elagabalus;³⁷ second, the reverse types of the coins now attributed to Elagabalus are no less relevant to him than to Caracalla. Although this reattribution substantially reduces the number of surviving dies and coins for Caracalla and increases those for Elagabalus, Schultz had noted that there was an unusually high number of coins for Caracalla compared with the rest of his family.³⁸ This aberration resulted from not separating the issues of Caracalla's sole reign from those struck under Septimius Severus and by misattributing coins of Elagabalus to Caracalla. A comparison of her total dies and coins with those resulting from the reattributions is as follows.

	<i>As Shown by Schultz</i>			<i>As Reattributed</i>		
	<i>Obv. Dies</i>	<i>Rev. Dies</i>	<i>Coins</i>	<i>Obv. Dies</i>	<i>Rev. Dies</i>	<i>Coins</i>
Septimius Severus	6	10	13	6	10	13
Julia Domna	5	5	6	5	5	6
Caracalla	24	50	96	19	30	49
Plautilla	1	1	1	1	1	1
Geta	5	10	19	5	10	19
Elagabalus	4	5	10	9	25	57
Julia Maesa	3	7	9	3	7	9
Severus Alexander	13	47	94	13	47	94
Julia Mamaea	4	19	39	4	19	39
Maximinus	9	31	43	9	31	43
Maximus	14	52	104	14	52	104
Gordian III	17	69	141	17	69	141

³⁷ See Schultz, table between p. 18 and p. 19, for summary of average weights for all denominations and emperors. The 12 denomination-six coins reattributed to Elagabalus have an average weight of 23.20 g as compared to an average weight of 22.63 g. for the remaining 11 pieces of Caracalla. Based on independent calculations and omitting a broken coin (no. 177), the average weight of the denomination-five coins reattributed to Elagabalus is 13.54 g as compared to 13.56 g for those remaining for Caracalla.

³⁸ See Schultz, p. 15.

Based on the reclassification of dies to Elagabalus, the statistics for the early Severan period can be refined as follows.

	<i>Obverse Dies</i>	<i>Reverse Dies</i>	<i>Coins</i>
<i>Period 193–211</i>			
Septimius Severus	6	10	13
Julia Domna	3	3	4
Caracalla	11	21	30
Plautilla	1	1	1
Geta	5	10	19
<i>Period 212–17</i>			
Caracalla	8	9	19
Julia Domna	2	2	2
<i>Period 218–22</i>			
Elagabalus	9	25	57
Julia Maesa	3	7	9
Synkletos	1	1	1

The resulting redistribution of dies and coins yields a more even pattern of production of coinage from Septimius Severus to Gordian III. These figures must remain tentative because future evidence, especially hoard evidence, could well reassign some of the youthful busts of M. Aurelius Antoninus on small denominations to Elagabalus, but the overall pattern of coinage would not be affected. Finally, the new classification also has the advantage of attributing large denomination coins to Elagabalus, in contrast to Schultz who attributed only one large denomination *aes* to Elagabalus, while there were many such specimens for his grandmother.

In sum, Schultz's obverse dies 3, 6, 6A, 6B and 7—coins bearing the names of *grammateis* M. Aurelius Philoumenus, Secundus, M. Aurelius Euboulus, M. Aurelius Hyllus, Aurelius Artistocles, the sons of Eutyches and the son of Soticus—should be reattributed from Caracalla to Elagabalus. In addition, I would distinguish the bulk of early Severan eponymous coinage as comprising two issues or at least as issues struck within two short periods: the first in 209–11 and the second in 214–17. The suggested reassignments of the obverse dies of M. Aurelius Antoninus are offered in Table 5 and the suggested redating and reattributions of the discussed Severan coins at Magnesia are listed in Table 6.

TABLE 5

Concordance of the Reassigned Obverse Dies of M. Aurelius
Antoninus with the Classification by Schultz

<i>Obverse Die</i>	<i>Schultz</i>
Caracalla, period 209–11	
Plate 27, 1	1
2	2
Caracalla, period 198–204 (small denominations)	
3	9
4	10
5	10A
6	12
7	13
8	14
9	16
10	16A
11	17
12	20
Caracalla, period 214–17	
13	4
14	5
Plate 28, 15	8
16	11
17	12A
18	15
19	18
20	19
Elagabalus	
1	3 (Caracalla)
2	6 (Caracalla)
3	6A (Caracalla)
4	6B (Caracalla)
5	7 (Caracalla)
6	1 (Elagabalus)
7	2 (Elagabalus)
8	3 (Elagabalus)
9	4 (Elagabalus)

TABLE 6
Reclassification of Select Coins of Magnesia ad Maeandrum

No.	Attributed to	Classification by Schultz		Eponym	Type	Reclassification	
		Obv.	Rev.			Dated to	Reattributed to
		<i>Dies</i>					
142	Septimius Severus	1	1	Onesimus	Apollo	198-204	209-11
143	Septimius Severus	1	2	Gratus	Homonoia	209-11 (implied)	209-11
147	Septimius Severus	5	6	Pallianus	Leto	198-204	209-11
148	Septimius Severus	5	7	Onesimus	Serapis	198-204	209-11
152	Julia Domna	1	1	—	Leto	195-213	After 212; probably 214-17
153	Julia Domna	2	2	Flavius Bassus	Men	195-213	After 212; probably 214-17
158	Caracalla	1	1	Onesimus	Apollo	198-204	209-11
159	Caracalla	1	1A	—	Homonoia	198-204	209-11
160	Caracalla	2	2	—	Homonoia	198-204	209-11
161	Caracalla	3	3	Aurelius Aristocles	Demeter	198-204	218-22
162	Caracalla	3	4	M. Aurelius Hyllus	Dionysus & Corybantes	198-204	218-22
163	Caracalla	4	5	Aurelius Amenarus	Dionysus & Corybantes	209-17	After 212; probably 214-17

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Classification by Schultz					Reclassification			
No.	Attributed to	Dies		Eponym	Type	Dated to	Reattributed to	Redated to
		Obv.	Rev.					
164	Caracalla	3	6	M. Aurelius Philoumenus	Warrior	198-204	Elagabalus	218-22
165	Caracalla	3	7	Secundus	Leucippus	198-204	Elagabalus	218-22
166	Caracalla	3	8	Secundus	Leucippus	198-204	Elagabalus	218-22
167	Caracalla	4	9	M. Aurelius Ameptus	Zeus	209-17	—	After 212; probably 214-17
168	Caracalla	3	10	M. Aurelius Philoumenus	Artemis	198-204	Elagabalus	218-22
169	Caracalla	1	11	—	Homonoia	198-204	—	209-11
171	Caracalla	6	13	—	Artemis	198-204	Elagabalus	218-22
172	Caracalla	6	14	M. Aurelius Euboulus	Athena	198-204	Egalabalus	218-22
173	Caracalla	7	15	Secundus	Dionysus	undated	Elagabalus	218-22
174	Caracalla	6	16	Aurelius Aristocles	Dionysus & Corybantes	198-204	Elagabalus	218-22
175	Caracalla	6A	16	Aurelius Aristocles	Dionysus Corybantes	198-204	Elagabalus	218-22
176	Caracalla	6	17	M. Aurelius Hyllus	Isis	198-204	Elagabalus	218-22
177	Caracalla	6B	17	M. Aurelius Hyllus	Isis	198-204	Elagabalus	218-22
178	Caracalla	6	18	M. Aurelius Philoumenus	Isis	198-204	Elagabalus	218-22

Classification by Schultz					Reclassification			
No.	Attributed to	Dies		Eponym	Type	Dated to	Reattributed to	Redated to
		Obv.	Rev.					
179	Caracalla	8	19	Demonicus	Leto	209-17	—	After 212; probably 214-17
180	Caracalla	8	20	Flavius Bassus	Men	209-17	—	After 212; probably 214-17
181	Caracalla	6A	20A	Son of Eutyches	Nike	198-204	Elagabalus	218-22
182	Caracalla	6	21	Secundus	Tyche	198-204	Elagabalus	218-22
183	Caracalla	6A	22	Secundus	Tyche	198-204	Elagabalus	218-22
184	Caracalla	6	22	Secundus	Tyche	198-204	Elagabalus	218-22
185	Caracalla	6?	22A	Secundus	Tyche	198-204	Elagabalus	218-22
186	Caracalla	6	23	Secundus	Male Figure	198-204	Elagabalus	218-22
187	Caracalla	6	24	M. Aurelius Hyllus	Artemis	198-204	Elagabalus	218-22
188	Caracalla	6	25	M. Aurelius Philoumenus	Artemis	198-204	Elagabalus	218-22
189	Caracalla	6	26	Son of Soticus	Dionysus	198-204	Elagabalus	218-22
213	Geta	1	1	—	Homonoia	209-12	—	209-11
214	Geta	2	2	Aurelius Tatianus	Helios	209-12	—	209-11
215	Geta	1	3	—	Homonoia	209-12	—	209-11
216	Geta	2	4	Gratus	Temple	209-12	—	209-11
511	Anonymous issue (Synkletos)	5	5	Secundus	Leucippus	Severan	Elagabalus	218-22

APPENDIX 1

The coinages of Maximinus and Gordian III both display complicated obverse die sharing among eponymous magistrates and, for the sake of convenience, those relationships can be best illustrated by the following tables.

Maximinus and Maximus

<i>Eponym on Reverse</i>	<i>Obverse Die</i> <i>Maximinus</i>			<i>Maximus</i>	
	<i>No. 1</i>	<i>No. 3</i>	<i>No. 5</i>	<i>No. 3</i>	<i>No. 4</i>
Actiacus	x			x	
Bassus		x			
Herostratus					x
Moschion					x
Paulus	x		x	x	x
Timotheus	x	x	x	x	x
Tychicus		x			x

Gordian III

<i>Eponym on Reverse</i>	<i>Obverse Die</i>						
	<i>No. 1</i>	<i>No. 4</i>	<i>No. 6</i>	<i>No. 7</i>	<i>No. 8</i>	<i>No. 9</i>	<i>No. 11</i>
Amarantus	x				x	x	
Antiochus			x	x			
Athenodorus		x		x	x		x
Demeus				x	x		x
Democrates				x			
Demonicus	x	x	x	x			x
Hermeros				x	x		
Pammenes			x	x			x
Philocrates	x						
Philomenus		x	x		x	x	
Photinus		x	x	x			x
Practicus							x

APPENDIX 2

Although numerous magistrates indicate a second or third term of office on their coins, few of these coins can be demonstrated to be the products of two or more terms. The majority of these magistrates who are styled TO B' or TO Γ' appeared to have only issued during their enumerated office. Smaller coins of these same magistrates which are without numerical designations omitted them because of the restrictions of space. Such small denominations are most likely contemporary with larger pieces bearing the more complete inscriptions and they do not constitute separate issues. In addition, reappearances of the same names on a city's coins often come after intervals suggesting successive generations rather than two different issues by the same official. Thus, in addition to the possibilities provided at Magnesia, I would note five other clear instances of the same magistrate minting two distinct issues.

At Hadrianopolis-Stratonicea, Lydia, in A.D. 127, Claudius Candidus, who presented his city's petition for the grant of the new imperial ethnic, was honored on coins struck for the occasion. See L. Robert, "Lettre d'Hadrien à la ville d'Hadrianopolis-Stratonicee en l'an 127," *Hellenica* (Paris, 1941), pp. 80-84, for full discussion of the epigraphic evidence. For the coins naming Candidus as *strategos*, see F. Imhoof-Blumer, *Lydische Stadtmünzen* (Leipzig, 1897), p. 39, nos. 13-14 (Hadrian) and no. 15 (Sabina). Candidus shortly thereafter held a second generalship and is so named on coins struck after A.D. 130 commemorating Antinoos as *theos*. See W. Gawantka and M. Zahrt, "Eine neue Inschrift der Stadt Stratonikeia-Hadrianopolis in Lydien," *Chiron* 7 (1977), pp. 305-14, who have dated this second issue to A.D. 131/2. For the coins, see Imhoof-Blumer, p. 37, no. 16; *SNGvAulock* 3187, *Waddington* 1002 and G. Blum, "Numismatique d'Antinoos," *JIAN* 16 (1914), p. 49, nos. 1-2, all which bear the legend ΕΠΙ CΤΡ. ΚΑΝΔΙΔΟΥ Β'.

At Sala, Lydia, C. Valerius Andronicus is named on two separate issues. The first is to the deified Antinoos, see Blum, *JIAN* 1914, p. 50, no. 1, who dated it to A.D. 134-38. The second is under Antoninus Pius; see *Waddington* 6452, *KlMünz* 2, p. 183, no. 1; *SNGCopLydia* 440-41; *BMCLydia*, p. 232, no. 39; *SNGvAulock* 3115 (restored) plus *Waddington*

6453 (M. Aurelius as Caesar). In addition, see the “quasi-autonomous” issues of Athena (*BMCLydia*, p. 229, no. 15, and p. 230, no. 20) and Synkletos (*GrMünz*, p. 746, no. 731, misread).

At Germe, Lydia, a Capito strikes coins for both Commodus Augustus (*Waddington* 801 and *SNGvAulock* 1110) and Julia Domna (*Waddington* 803, *SNGvAulock* 1113 and *SNGFitz* 4171) and seems to be the same man. At Attaea, Mysia, a Rufus issues coins for L. Verus (*SNGvAulock* 1078 and H. v. Fritze, *Die antiken Münzen Mysiens* [Berlin, 1913], p. 129, no. 387), Commodus (*SNGvAulock* 1078 and v. Fritze, p. 130, no. 389), and Crispina (*KIMünz* 1, p. 19, no. 8; *SNGvAulock* 1081; v. Fritze, p. 132, no. 396). He then apparently coined for Septimius Severus and Caracalla (*GrMünz*, p. 612, no. 163; *BMCMysia*, p. 17, no. 12; *SNGvAulock* 1083; v. Fritze, p. 135, no. 409), because one coin (*GrMünz*, p. 612, no. 163) specifies that he held the generalship for the second time. Finally, at Cyme, Aeolis, a Flavius Pauseros struck coins for Caracalla (*BMCTroas*, p. 119, no. 138; *SNGvAulock* 1625; *McClellan* 7927; MacDonald [above, n. 16], p. 8, no. 275) and Julia Domna (*SNGCopAeolis* 147), which date to 212–17 judging by the mature, heavily bearded obverse busts of Caracalla. Then he coined, during his “third” generalship for the Caesar, Maximus (*SNGvAulock* 1655), which, if this Pauseros is the same man, represents an interval of some 20 years.

A CORRIGENDUM TO *THE CISTOPHORI OF HADRIAN*

(PLATE 29)

WILLIAM E. METCALF

The most recent of the American Numismatic Society's Numismatic Studies is this author's treatment of the Hadrianic cistophori.¹ In it an attempt was made to present this most important of Hadrian's provincial coinages in more systematic fashion; many coins and some mints which were unknown to or unnoticed by Herzfelder² were noted. One such mint must now be removed from consideration.

When the book went to press in 1978 a single coin of the following description was known:

Obv.: HADRIANVS AVGVSTVS P P Head of Hadrian bare, r.

Rev. COS III Rape of Persephone. Hades with Persephone in fast quadriga moving r.; beneath, overturned flower basket.³
(Plate 29, 1).

On the basis of the individuality of the style and the predominance of the type at Nysa ad Maeandrum, the coin was attributed to that city. The uniqueness of the coin seemed no bar to postulating a mint there, since many of the products of Hadrian's mints survive in only a few specimens.⁴

¹ W. E. Metcalf, *The Cistophori of Hadrian*, ANSNS 15 (New York, 1980) hereafter cited as Metcalf. References in bold face are to type numbers, those in Roman to running catalogue numbers.

² H. Herzfelder, "The Cistophori of Hadrian," NC 1936, pp. 1-29. Herzfelder's methodology was sound and it was mainly the appearance of a wealth of material since he wrote that made possible revision of his attributions and chronology.

³ *NGvonaulock* 6628 = Metcalf 43, cat. 193.

⁴ To take those cases in which the author followed Herzfelder, Alabanda, 4 examples; Aphrodisias, 2; Thyateira, 1; Eumeneia, 3. Synnada, with only two examples of different types, was unknown to Herzfelder but seems to me certain.

In January 1980 the Society had the opportunity to acquire the second known specimen of the type (10.44 g ↑, Plate 29, 2). Our new coin is somewhat battered from circulation, and parts of both faces are obscured by traces of overstriking (obv. on rev. of an Augustan cistophorus with rev. six grain stalks). The obverse is clear enough, however, to show that the die is identical with one used to strike two types which surely belong to the mint of Sardis.⁵ There is no evidence to indicate that Hadrian's cistophoric dies travelled, and in general reverse types are peculiar to a single mint. Both coins portraying the Rape of Persephone should therefore be added to the already considerable output of Sardis, and Nysa eliminated from the catalogue of Hadrianic mints.

Although the Rape did not predominate in the typology of Sardis as it did at Nysa, the cults of Demeter and Kore were prominent there,⁶ and in fact the Rape itself occurs sporadically in the city's imperial coinage:

Vespasian	<i>SNGCopLydia</i> 525
Domitian	<i>Waddington</i> 5250
Trajan	<i>BMCLydia</i> , p. 256, 131
Caracalla	<i>SNGvonaAulock</i> 3198
"Caracalla-Gordian"	<i>BMCLydia</i> , p. 249, 89.

The emergence of the new coin and its consequences for the "mint or Nysa" provide a concrete example of the rapidity with which new evidence may appear in a series with as low a survival rate as that of the Hadrianic cistophori. Thus while the general picture now seems clearer, many of the finer details await clarification through further discoveries.

⁵ The obverse die is that of Metcalf 202 and 203 (here Plate 29, 3 and 4) with reverses of Demeter and Kore respectively. The Demeter type (Metcalf 46) is linked to another (Metcalf 45) that is identical except for the presence of a star in upper r. field, and that coin in turn is inextricably die linked to the unique piece in Munich with **SARD** in exergue (Metcalf 44, cat. 194).

⁶ For a brief summary of the evidence see Metcalf, pp. 54–57, with bibliography. References to the occurrence of the Rape scene at other cities are given by L. Lacroix, "Un aspect méconnu de la légende d'Héracles sur une monnaie de Pergame," *RBN* 1956, pp. 5–30, esp. 27–29. I thank Miss A. E. M. Johnston for drawing my attention to this article.

POSTHUMOUS HADRIANIC MEDALLIONS?

(PLATE 30)

M. R. KAISER-RAISS

The theory of a posthumous coinage of Hadrian, struck in the reign of Antoninus Pius, was rejected by P. L. Strack on the basis of several convincing arguments. The most important were perhaps the lack of the *Divus* designation on the "posthumous" pieces, for Hadrian had been consecrated, and the want of evidence from coin hoards.¹ Recently M. S. Pond Rothman has tried to reconstruct from among the medallions of Hadrian a series of posthumous medallions, created by Antoninus Pius to celebrate the consecration of his adoptive father: "all of the posthumous medallions were created to celebrate the consecration ceremonies for Hadrian in 139 [*sic*]. In effect Antoninus utilized the medallions to underscore his success in the earlier conflict with the Senate over its unwillingness to deify Hadrian, since members of the senatorial class would number among the recipients of the posthumous pieces."² We know

¹ H. Mattingly, "Some Historical Coins of Hadrian," *JRS* 15 (1925), pp. 209–22; *RIC* 2, pp. 316–17, 328; *RIC* 3, p. 4, and Corrigenda, p. xvii; *BMCRE* 4, pp. xlviii–xlix. Against his theory, P. L. Strack, *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts*, 2 (Stuttgart, 1933), pp. 189–92 (hereafter cited as Strack). See also P. V. Hill, *The Dating and Arrangement of the Undated Coins of Rome, A.D. 98–148* (London, 1970), pp. 78–79, 83.

For plaster casts of medallions of Hadrian and Antoninus Pius I should like to thank J.-B. Giard, D. Nash, D. Bateson and A. Kromann Balling; for photos, L. Göppner. Additionally, this article owes a great deal to the kindness of T. V. Buttrey who has read and revised the manuscript and even included some arguments of his own.

² M. S. Pond Rothman, "Posthumous Hadrianic Medallions," *ANSMN* 23 (1978), pp. 107–28 (p. 126 cited). She dates the consecration, and therefore the medallions which she takes to be posthumous, to 139. But the epigraphical evidence shows Hadrian already *Divus* in 138: see *CIL* II, 4057; III, 501; VI, 999 = Dessau 333.

from Dio that the deification took place when Antoninus, after his return from Baiae, refused to accept imperial powers if the Senate did not consecrate Hadrian and confirm his acts.³

In fact, on none of the medallions selected by Pond Rothman as celebratory of his deification is Hadrian entitled *Divus*, which makes Antoninus' collision with the Senate pointless, and his attitude toward Hadrian an affront, rather than *pietas erga parentem*.⁴ If the medallions issued to celebrate the consecration do not indicate that Hadrian was consecrated, something is very wrong, and it is useful to examine the other criteria on which Pond Rothman based her thesis.

A. The development of the Hadrianic Victoria in biga die.

The author notes four apparent peculiarities:

1. "The IMP CAESAR HADRIANVS AVG COS III PP on the obverse is a title which never occurs in the coinage" (p. 109). This is true but not surprising, nor is it evidence that the piece is non-Hadrianic. The first bronze medallion of Antoninus listed in Gneecchi reads ANTONINVS AVG PIVS PP TRP COS III IMP II, a formulation which does not appear on his coins (Gn. 2, p. 9, no. 1).⁵ A number of medallion legends of Marcus Aurelius are formulated in titulatures which do not appear on his coins: AVRELIVS CAESAR AVG PII F TRP II COS II (Gn. 2, p. 30, no. 31), IMP CAES M ANTONINVS AVG TRP XXVI COS III (Gn. 2, p. 27, no. 1), M ANTONINVS AVG ARM PARTH MAX TRP XXIII (Gn. 2, p. 29, no. 5), M AVREL ANTONINVS AVG GERM SARM TRP XXXII (Gn. 2, p. 27, no. 4; p. 29, no. 23, etc.). No one would suppose that any of these is posthumous.

2. "COS III PP is inscribed on both obverse and reverse dies. Such redundancy does not appear in the coinage, or in the medallions of other emperors" (p. 109). The doubled legend is redundant, but it is no less so

³ Dio Cassius (ed. Boissvain), 70.1-3.

⁴ On Pietas see Th. Ulrich, *Pietas (pius) als politischer Begriff im römischen Staate bis zum Tode des Kaisers Commodus*, Breslauer historische Untersuchungen 6 (Breslau, 1930); C. H. Dodd, "The Cognomen of the Emperor Antoninus Pius. Its Origin and Significance Considered in the Light of the Numismatic Evidence," *NC* 1911, pp. 6-41; M. Manson, "La Pietas et le sentiment de l'enfance à Rome d'après les monnaies," *RBN* 1975, pp. 21-80.

⁵ F. Gneecchi, *I Medaglioni Romani*, 3 vols. (Milan, 1912) (cited as Gn.).

under Antoninus than under the living Hadrian. That the phenomenon is unknown for other emperors is incorrect: see *BMCRE* 2, p. 8, no. 48, Vespasian P M/PONT MAX; *BMCRE* 2, p. 390, no. 411, Domitian COS XIII / COS XIII; *BMCRE* 5, pp. 100–101, nos. 405–10, Septimius Severus COS II/COS II, a large issue of denarii with many dies.

3. The apparent carelessness of the engravers. Under Hadrian the series of the “medallions proper,” as J. M. C. Toynbee designates these large-size bronze pieces without the letters S C on the reverse,⁶ was still in the course of development. Minting of these exclusive pieces became routine under Antoninus Pius, and the engravers reached heights of virtuosity during the reigns of Marcus Aurelius and Commodus. But the “medallions proper” of Hadrian were still experimental. Some pieces bear a sestertius die obverse and a medallion die reverse (Plate 30, 1).⁷ Some reverses are anepigraphic, others bear inscriptions. Apparently no rigid rules obtained for the production of these pieces in the reign of Hadrian. There is a priori no reason to suppose that Antoninus’ engravers and strikers were more careless than those of Hadrian, and that Hadrianic pieces which offend our sense of propriety must be posthumous.

4. “The final anomaly is the extraordinary portrait type, with a very deep bust of Hadrian clad only in an aegis. The several incongruities of this ... ‘Hadrianic’ medallion are signs of posthumous creation” (p. 109). Inasmuch as this imperial portrait type had earlier appeared under Trajan, and later under Marcus Aurelius and Commodus,⁸ without any suggestion that the emperor was thereby to be considered deified, or the medallions posthumous, why it should bear that sense in the case of the Hadrianic medallion requires explanation.

None of these considerations is evidence for the posthumous creation of the medallion type in question. Pond Rothman notes as well the history of the reverse die. It appears in three states: (i) inscribed COS III PP and paired with obverse dies of Hadrian; (ii) recut to read PM TRP COS II (traces of the Hadrianic legend remain) and paired with a portrait of

⁶ J. M. C. Toynbee, *Roman Medallions*, ANSNS 5 (New York, 1944), p. 17.

⁷ B. Kapossy, “Römische Medaillone und Kontorniaten,” *Jahrbuch des Bernischen Historischen Museums* 51/52 (1971/72), p. 130; H. Dressel, *Die römischen Medaillone des Münzkabinetts der staatlichen Museen zu Berlin*, ed. K. Regling (Zürich, 1972), pl. 2, 10.

⁸ As observed by Pond Rothman, p. 109, n. 6.

Antoninus; (iii) recut again so as to eliminate the legend altogether (again traces remain), and to alter the Victoria standing on the biga to a figure of Faustina I with a billowing veil. In the last state it is paired with an obverse of Diva Faustina, and presumably is associated with her consecration (see *ANSMN* 23, Plate 19, 4). There is no doubt of the order of the three states, which are indicated by the continuing wear of the die as well as the recutting of the legend. P. Rothman claims, "The ensuing career of the Victoria die itself indicates that the unusual Hadrianic medallion originated in the mint of Antoninus" (p. 109). Apparently she supposes that the use of the die for a Diva Faustina medallion implies that its use with Hadrian equally suggests his consecration. But the same die was used simply with a portrait of the living Antoninus, (ii) above, without any notion of his deification.

In short, there is no evidence whatever that the Hadrianic Victory in biga medallion is posthumous. The die was held over from Hadrian's reign, and used again under Antoninus. This in fact happened frequently.⁹ Sometimes dies were preserved to be used at different times within a reign, e.g. the reverse struck for Marcus Aurelius in 161/2 (Gn. 2, p. 37, no. 86), for Lucius Verus in 167/8 (Gn. 2, p. 47, no. 20). Sometimes dies were carried over from one reign to the next, e.g. the Victoria quadriga reverse struck in 179 for Commodus before Marcus' death, with IMP II COS II PP (Gn. 2, p. 55, no. 37), which reappeared recut to TRP VI IMP III COS III PP in 181 during Commodus' sole reign (Gn. 2, p. 67, no. 144), and altered again to TRP VII, etc. in 182 (Gn. 2, p. 67, no. 145).¹⁰ Here too the modification of the older legend can clearly be seen (Plate 30, 2).¹¹ There is nothing strange in the reuse of a Hadrianic die under Antoninus, nor is there any evidence that the Victoria biga die was first cut under Antoninus.

⁹ For examples of reused dies, Dressel (above, n. 7), p. 130, no. 66; p. 79, no. 41. P. R. Franke, "Zur Verwendungsdauer römischer Medaillonstempel," *Chiron* 5 (1975), pp. 407–10.

¹⁰ M. R. Kaiser-Raiss, *Die stadtrömische Münzprägung während der Alleinherrschaft des Commodus. Untersuchungen zur Selbstdarstellung eines römischen Kaisers* (Frankfurt, 1980), p. 57.

¹¹ Kaiser-Raiss (above, n. 10), pl. 4, 2 (Paris).

B. The Aeneas and Dionysus types.

One need consider only the former, since “reattribution of the Dionysus medallions to Antoninus depends primarily upon the evidence of their die links to the Aeneas series” (p. 113) — they stand or fall together. Again, there is no objective evidence that the Aeneas reverses with Hadrianic obverses were not struck under Hadrian. Pond Rothman is impressed that both Hadrian and Antoninus obverses are found paired with the same reverse dies. But it does not follow that Antoninus struck them all. Further, her reading of the Aeneas type is open to challenge. The scene shows Aeneas’ arrival in Latium, but he is carrying Anchises who had died in Sicily (see *ANSMN* 23, Plate 20, 6). Therefore, she concludes, there is an allusion to Antoninus = Pius Aeneas and his devotion to his father Hadrian = Anchises. “Hence the iconography of the Aeneas type alone is a substantial hint that both medallions which employ it were issued during the reign of Antoninus” (p. 113). But Aeneas carrying Anchises is not necessarily to be regarded as an allusion to filial piety; Anchises belongs to the iconography of Aeneas as do the club and lion skin to Heracles. Compare the common denarii of Caesar with type of Aeneas and Anchises, certainly not intended to emphasize the *pietas* of Julius toward his father, the praetor C. Julius Caesar (*BMCR* 2, p. 469, nos. 31–35). And Antoninus himself struck a second version of the scene in which Anchises does not figure (Gn. 2, p. 20, no. 99; see Plate 30, 3).

Having arbitrarily located the Hadrianic issue under Antoninus, and initiated the equation of the mythical characters with the historical, Pond Rothman proceeds to elaborate interpretations of both the Aeneas and the Dionysus medallion types, which reveal Hadrian as Apollo and Antoninus as Dionysus. However attractive the results may be, the method is unacceptable. “Once the reverse dies are reattributed to Antoninus’ mint, the specific content of the Dionysiac image yields to interpretation” (p. 114); but we cannot reattribute these pieces to serve our own convenience. Even if the types remain entirely opaque in a Hadrianic setting, some *evidence* is needed to support the allegation that the Aeneas and Dionysus medallions with Hadrian’s portrait are not his; and there is none. Here, as before, dies cut and used under Hadrian survived at the mint to be reused in 138 or 139 under Antoninus. It is of

course precisely in the first years of a new reign that repeated medallic types or themes and the reuse of dies cut in the preceding reign are to be expected, while in subsequent years new ideas would come to be expressed in new dies.¹²

C. "All of the medallions with reverses of Silvanus should be reassigned to the mint of Antoninus" (p. 118).

All of the medallions in question are struck to the portrait of Hadrian; the type does not occur with Antoninus. An Antonine attribution is achieved by Pond Rothman's emphasizing the extensive die linkage which associated the reverse type with obverses which bear the otiose COS III PP or the deep aegis bust. On the inadequacy of these criteria, see above. She also stresses the stylistic similarities between the Silvanus type and the Apollos of Antoninus' A.D. 139 medallions—"the same die cutter" (p. 120). There is nothing remarkable in the employment of the same engraver late in Hadrian's reign and early in Antoninus'.

D. The Concordia medallions of Hadrian and L. Aelius Caesar.

All agree that the reverse type, which occurs with obverse portrait of Hadrian or of Aelius, alludes to Hadrian's adoption of Aelius in 136. Pond Rothman is disturbed that the two obverse dies are not physically parallel: Hadrian's carries the redundant COS III PP, is of different letter style, and of a different size from that of Aelius: "such sloppiness is inconceivable in one of a pair of medallions" (p. 121). Now since the Hadrianic medallions otherwise illustrate incongruities of manufacture, the differences between these two pieces do not prove that they were struck at different times. Even if they were, that is not evidence that one of them is posthumous. On the contrary, Hadrian's Concordia medallion, without the twin piece of his adopted son, makes no sense in 139. That Antoninus wanted to evoke the memory of L. Aelius' adoption by Hadrian is hardly credible. As soon as he could he dissolved the betrothal between his own daughter Faustina II and the son of Aelius, in order to

¹² Strack 3, p. 31, "In der ersten Emission von 139 zeigen die Medaillons eine eigentümliche Erscheinung. Vier von acht Medaillons sind mit Rs. Stempeln Hadrians geprägt worden, verknüpfen also die Prägungen des Pius mit denen seines Vorgängers so eng, wie es sonst im zweiten Jahrhundert nicht vorkommt." He calls it "Arbeitsersparnis."

realize his own dynastic intentions by giving her in marriage to his nephew Marcus. This he did against the dead Hadrian's will. And even later Antoninus kept Lucius Verus in the background.¹³ It was Marcus rather than Lucius whom he chose as his son-in-law and political partner contrary to the plans of Hadrian, who had compelled him to adopt both children on equal terms.

E. The Annona-Ceres medallion of Hadrian.

The attribution of this piece to the posthumous issue of Antoninus is very unsatisfactory. Numismatic reference to the *annona* is extremely common on imperial coins from Nero onward. The only criterion which Pond Rothman forwards for the reattribution of an issue which, as she admits, is perfectly appropriate to Hadrian, is again the redundant imperial titulature.

F. The Boar hunt type.

We know from the letters with Fronto that Marcus did hunt for boar,¹⁴ and we know of Hadrian's similar interest.¹⁵ If coins or medallions of either refer to such activities, that is not surprising; it is perhaps more surprising that the reference to either should be forwarded on some other emperor's coins or medallions. Once again the redundant legend COS III PP leads Pond Rothman to claim that the medallion with the doubled titles, and indeed a variety with single COS III PP, are not Hadrianic but Antonine. One curious consequence of this attribution is the argument that the similar reverse struck for Marcus Aurelius Caesar is deliberately reminiscent of "Hadrian's passion for the sport," though reflecting in its details not a Hadrianic but an Antonine medallion struck in memory of Hadrian's passion for the sport.

G. "Finally, some, if not all, of the medallions with Apolline iconography are posthumous" (p. 123).

Again the doubled legend figures as part of the argument for the posthumous production of these medallions, as well as the fact that "an

¹³ Cf. Strack 3, pp. 108–24.

¹⁴ Fronto (ed. Haines), 1, p. 179.

¹⁵ See J. Aymard, *Essai sur les chasses romaines des origines à la fin du siècle des Antonins (Cynegetica)* (Paris, 1951), pp. 523–30. Strack 2, p. 92.

Apollo type never occurs in the regular Roman coinage [*scil.* of Hadrian]" (p. 124). This is true, but not relevant. Note the parallel case, that medallions struck in the name of Antoninus occur with divinities such as Cybele, Vulcan and the Dioscuri, who do not figure on his regular Roman coinage.

These few remarks may suffice to indicate the insufficiency of the criteria by which Pond Rothman attempts to isolate posthumous Hadrianic medallions, and a fortiori the insubstantial nature of the historical and political conclusions which she then draws. What is perhaps most striking in that attempt is the absence of any consideration of the central difficulty: How can it be that medallions struck specifically to celebrate the consecration of Hadrian never refer to him as *Divus*? Even this might be tolerated if there were any objective evidence to support the case for a posthumous production, yet there is not a single instance of the sort—e.g. the recutting of an Antonine die to provide a die for Hadrian, or a clear die break enlarging as it moved from Antoninus to Hadrian, or an overstrike of a Hadrianic on an Antonine piece. On the contrary, where a chronological sequence can be observed, as in the case of the Victoria biga die, it is exactly what one would expect: first Hadrian (not yet *Divus*), then Antoninus, finally the deceased Faustina. The criteria invoked against the normal interpretation of the evidence are essentially subjective and not capable of substantiation, e.g. that sloppy work at the mint is more easily to be expected under Antoninus than under Hadrian. There is no evidence for this, nor indeed for the whole thesis that Antoninus struck posthumous medallions in the name of Hadrian.

The material should be read as it stands. The first "medallions proper" in large number were struck under Hadrian. That is clear from their portraits and legends, even if we cannot be sure of the significance of some of the individual types. Antoninus decided to follow this model, and continued to issue medallions, many struck from Hadrianic dies which had been preserved, as Pond Rothman has so well shown in her illustrations of die linkage. The fact that in 138 or 139 these dies were still in use suggests that the cutting of new ones was complicated, time-consuming or expensive, or indeed that it was uneconomical to discard dies of high quality and obvious usefulness.

TRANSITIONAL STYLE IN THE ŚIVA IMAGES ON KUṢĀṆA GOLD COINS*

(PLATE 31)

GERI HOCKFIELD MALANDRA

The gold coinage of the Kuṣāṇa empire is well known for its beauty and diversity of types. Together with inscriptions dated in regnal years of the Kuṣāṇa kings, the coins provide primary evidence for the reconstruction of the history of South Asia from the first through third centuries A.D. Beyond their role as historical evidence, the coins also document changes in artistic styles of the same period. A close examination of the changes in the reverse types which illustrate the brahmanical deity, Śiva, will show two things. First, such changes parallel geopolitical shifts in Kuṣāṇa power from Gandhāra in its early years, east to Mathurā and beyond during its heyday. Second, the coins in part of this series exhibit a style which, unprecedented in the Kuṣāṇa period itself, clearly anticipates that of the sculpture of the following Gupta period. Since Śiva is the only brahmanical deity to appear throughout the whole series of Kuṣāṇa coins (others appear on the coins of Huviṣka only), his type best illustrates these developments.

Controversy surrounds both the absolute dating of the era of Kaniṣka, the most famous Kuṣāṇa king, and the precise definition of the boundaries of Kuṣāṇa power. A resolution of these problems would go beyond the scope of this paper, so for the sake of convenience, I assume that the era of Kaniṣka is the same as the Śaka era of A.D. 78, although cogent arguments for a slightly later date have been offered elsewhere.¹ Using

¹ A presentation of the various arguments for dating the era may be found in A. L. Basham, ed., *Papers on the Date of Kaniṣka* (Leiden, 1968); J. Rosenfield, *The*

this date the coins to be discussed here, of Vima Kadphises, Kaniška I, Huviška and Vāsudeva I, span a period from about A.D. 50 to 175. During this time, Kuṣāṇa power was extended from Taxila² east through the Panjab to Mathurā and beyond. Inscriptions form the primary basis for reconstruction of this movement; where inscriptions dated in the regnal year of a Kuṣāṇa king are found, it is assumed that his power covered the provenance of the inscriptions. No inscriptions of Vima Kadphises have been found as far east as Mathurā,³ and I assume his power was restricted to Taxila and the Panjab, although others would extend it as far as Mathurā.⁴ As I will show, the contrast in style between the coins of Vima and Kaniška seems to support the more conservatively drawn boundary. Kaniška and Huviška clearly ruled in what is now northern India.⁵ Vāsudeva's sphere of influence seems to have included Mathurā, but by his reign the scope of Kuṣāṇa power had narrowed.⁶ Further, a survey of coin finds seems to show a larger concentration of coins of Kaniška and Huviška than of Vima and Vāsudeva in northern India, although it is not possible to use provenance of finds to establish precise boundaries of Kuṣāṇa power.⁷

Dynastic Arts of the Kushans (Berkeley, 1967), pp. 253–58, summarizes them and gives his own suggested date in the early second century A.D.

The research for this paper was begun at the Graduate Seminar of the American Numismatic Society in 1976. I would like to thank University of Minnesota Regents Professor Emeritus Tom B. Jones for his encouragement of my numismatic interests.

² The most important evidence for this comes from the excavations at Taxila. See Sir J. Marshall, *Taxila*, 3 vols. (Cambridge, Eng., 1951) and F. R. Allchin, "Archaeology and the Date of Kaniška: the Taxila Evidence," in Basham (above, n. 1), pp. 4–34, for a detailed review of Marshall.

³ D. C. Sircar, "The Kushanas," in R. C. Majumdar, ed., *History and Culture of the Indian People* (Bombay, 1951), *The Age of Imperial Unity*, pp. 139–40.

⁴ According to J. E. Schwartzberg, ed., *A Historical Atlas of South Asia* (Chicago, 1978), p. 175, Vima controlled India as far east as Varanasi. See also Rosenfield (above n. 1), p. 18, and B.N. Puri, *India under the Kushanas* (Bombay, 1965), p. 26.

⁵ Sircar (above, n. 3), p. 141, and Rosenfield (above, n. 1), pp. 41 and 59.

⁶ Sircar (above, n. 3), p. 152; Rosenfield (above, n. 1), p. 105.

⁷ See Bh. Chattopadhyay, *The Age of the Kushanas* (Calcutta, 1957), pp. 232–47.

The reverse types of the gold coins of Vima Kadphises portray the god Śiva alone or with his bull, Nandi.⁸ In the first coin illustrated (Plate 31, 1) Śiva stands frontally, holding a *triśūla/paraśū* (trident/battle axe) in his right hand. A *mṛga* (antelope) skin hangs from his left arm; he holds a *kamaṇḍalu* (pot) in his left hand. His hair is *uṣṇīṣin* (piled in a top knot), and he is nude and *ūrdhvaliṅga* (ithyphallic).⁹ He wears either a *niṣka* (necklace) or *yajñopavīta* (sacred thread).

The second example, Plate 31, 2 (ANS), portrays Śiva and Nandi, his bull; here the god wears a draped lower dhoti-like garment. Most significantly, in all such coins of Vima, there appears to have been some attempt made to delineate musculature and *contrapposto* by exaggerating the size and angle of the right hip. The limited success of this attempt is clear when these types are compared with the earlier Indo-Greek Heracles type, for example, on the reverse of a coin of Demetrius (Plate 31, 3). While the Hellenistic tradition behind the Śiva type cannot be ignored entirely, ample evidence exists to demonstrate indigenous precedents for the Śiva iconography, if not for the style of this type.¹⁰

In terms of style alone, the Śiva type of Vima remains problematic. To explain its peculiarities, it is useful to compare it with a sculptural image of a *yakṣiṇī* from Mathurā of the early Kuṣāṇa period (Plate 31, 11).¹¹ The *ābhaya* stance of this image has even earlier precedents in Indian sculpture.¹² Compared with this relief, the Śiva type of Vima

⁸ Both Rosenfield (above, n. 1), pp. 22–26, 92–94, 106–8, and J. N. Banerjea, *The Development of Hindu Iconography* (New Delhi, 1974), pp. 121–28, describe the entire series in detail.

⁹ According to Banerjea (above, n. 8), p. 137, an ithyphallic Śiva does not appear until the coins of Huviṣka.

¹⁰ See Banerjea (above, n. 8). By contrast, R. Göbl, "Roman Patterns for Kushana Coins," *JNSI* 22 (1960), p. 84, suggested that the standing Śiva type could have been inspired by a medallion of Hadrian, depicting Silvanus or Dionysus with a buck before a temple. However, this medallion could not have been struck before A.D. 128, when Hadrian was granted the title *pater patriae*, which appears in the obverse legend. And, if this is a posthumous issue, the date must fall after 138. (William E. Metcalf, ANS, personal communication, July 1976.) Further, the style of this type bears little resemblance to that of the Śiva type of Vima's coins.

¹¹ Mathurā Museum (photograph courtesy of F. M. Asher).

¹² For example, see *yakṣis* from Bhārhut, in B. Rowland, *The Art and Architecture of India* (Baltimore, 1974), fig. 29, and from Sāñci, fig. 43.

suddenly makes sense. Its lack of success in portraying *contrapposto* does not reflect the failure of the die cutter to copy a well-established Indo-Greek type accurately. Rather, it belongs in part to the indigenous sculptural tradition which produced many *ābhāṅga* figures, where the outline of the jutting hip is more important than the relationship of skeletal, muscular and surface structures demanded by Hellenistic ideals. The awkwardness of the coin's image, in itself a clue to its transitional character, is the result of the attempted juxtaposition of Hellenistic and Indian stylistic elements. This syncretistic style of Vima's coins seems to reflect an interest in the new eastern frontier of Kuṣāṇa power.

Once this relationship is seen, the elaboration of Śiva types on the coins of Kanīṣka seems perfectly natural. During his reign, Kuṣāṇa power was extended further east toward what is now north central India. The change in the Śiva type parallels this shift. In Kanīṣka's Śiva type (Plate 31, 4), instead of two arms, the god now has four. His hair is piled in a top-knot, and he wears *yajñopavīta* and dhoti. He holds five iconographical symbols of Śiva, *triśūla*, *mṛga* and *kamaṇḍalu* (as he did in Vima's types), and in addition, *ankuśa* (goad) and *vajra* (thunder-bolt). To the best of my knowledge, sculptural images similarly elaborated do not appear until the Gupta period. It is important to note that here no attempt was made to superimpose muscles on the essentially linear and angular composition. The smooth torso, bulging belly and tubular arms are clues that this type followed an Indian stylistic tradition.¹³ Further, the rather narrow head, emphasized by its pointed top knot and low forehead, is similar to several images from Kuṣāṇa Mathurā, including the famous Kātra Buddha¹⁴ and a Śiva image carved on a *liṅga*.¹⁵ An even more striking similarity can be seen in the heads of the small Buddhas (?) on a *torāṇa* relief from the same region.¹⁶

¹³ My assumption that the style of a coin type reflects the style of contemporary sculpture is supported by a comparison made by Rosenfield (above, n. 1), pp. 25–26, of the Mathurā portrait statue of Vima and the obverse type of one of his copper coins.

¹⁴ J. Ph. Vogel, *La Sculpture de Mathura* (Paris, 1930), pl. 26a.

¹⁵ A. K. Coomaraswamy, *History of Indian and Indonesian Art* (New York, 1965), pl. 18, fig. 68.

¹⁶ Vogel (above, n. 14), pl. 8d.

With the coins of Huviṣka, who extended Kuṣāṇa power furthest to the east, the trend toward increasingly Indian traits in the Śiva type is fully realized. These traits include the emphasis on surface texture, linear composition and smooth, taut body planes. What were probably earlier Huviṣka types carry on the style of Kaniṣka's Śiva type (Plate 31, 5) and their similarities are so striking that I think they can be explained by postulating either chronological proximity or production at the same mint or both. Unfortunately, the evidence for the location of Kuṣāṇa mints is inconclusive.

The Indian character of Huviṣka's Śiva types is even more clearly seen in the next group of coins. In the first (Plate 31, 6) Śiva stands erect and frontally (*samapāda*). He has three heads, four arms, holds a *triśūla*, *vajra*, *mṛga* and six-spoked *cakra* (wheel); he is also ithyphallic. The stiff-legged, frontal stance of this figure is comparable to that of the well known Guḍimāllam *liṅga* which most scholars would place before the reign of Huviṣka, that is, before the second century A.D. In the next coin (Plate 31, 7) Śiva has three heads, four arms and wears a dhoti. He holds a *triśūla*, *daṇḍa* (club), *kamaṇḍalu* and *agni* (fire). Here the figure is again portrayed in *ābhaya* pose, as was the Śiva of Vima's coins, but now it is graceful, restrained and more convincing than that of any of the previous types. The breadth of the shoulders contrasts with the slim, taut waist, which is accentuated by the thick belt fold, and the horizontal angularity of the shoulders enhances the diagonal thrust of the right hip. The grace of this type may be compared with Gupta Buddhist sculptures of the fifth century from Mathurā and Sārnāth. Specifically, the *ābhaya* pose of the coin type, now subtly executed, appears to be related most closely to that of the Sārnāth Buddhas produced around A.D. 475 (Plate 31, 12).¹⁷ Although the coins are small and the sculptures large, the stylistic relationship is clear. Thus, these coins of Huviṣka seem to record a precedent set in the second century for later Gupta style. What other Kuṣāṇa period repositories of this style may have existed are no longer preserved. The well known Mathurā and Sārnāth Kuṣāṇa style, exemplified by the Friar Bāla Buddha dated in the third year of Ka-

¹⁷ Sarnath Museum (photograph courtesy of F. M. Asher).

niṣka's reign¹⁸ does not approach the refinement of the Śiva types of Huviṣka. The stolid, upright stance of the Friar Bāla Buddha, with its thick torso, contrasts with the grace of the coin images. In this respect, these coins may be seen either as anomalies, or as part of the transition to a true Gupta style, which was to be completed only in the fifth century.

I believe that this Gupta-like style, found on these Kuṣāṇa coins, is not an anomaly, but rather provides the earliest evidence for the transition to the classic Gupta sculptural style. The problem of identifying transitional images for these periods has yet to be completely resolved.¹⁹ In this case, within the limits of the earlier period, the style of the coin type anticipates that of the sculpture of the later period. Some Gupta coin types seem to have been derived from later Kuṣāṇa types,²⁰ but the earlier Śiva types discussed here do not seem to have directly influenced Gupta coin images. Underlying this argument is my assumption that such Kuṣāṇa types could have reflected current sculptural styles. Although earlier Śiva images may be found, especially on coins and seals, there are no clear precedents for the style and iconography of the Kuṣāṇa types. Rather than assuming that the iconography was developed in the narrow confines of coin or seal workshops, I prefer to hypothesize that the coin types are reflections of contemporary sculptural style, which has not been preserved. Such a relationship has been documented for classical coins and sculpture.²¹ And, the relative scarcity of brahmanical art compared with Buddhist and Jain material for this period might explain the lack of evidence. I would suggest further that the association of the "new" style of Huviṣka's Śiva with the (brahmanical) iconography of a minority religion is not coincidental. Instead, it seems possible that

¹⁸ Vogel (above, n. 14), pl. 28a.

¹⁹ See J. Harle, "Late Kushan-Early Gupta: A Reverse Approach," in N. Hammond, ed., *South Asia Archaeology* (London, 1973), pp. 231–40, for a discussion of other means of resolving the problem of finding material which provides a transition from Kuṣāṇa to Gupta style.

²⁰ See B.N. Mukherjee, *Nānā on Lion* (Calcutta, 1969), for an interesting treatment of the development of Gupta coin types from earlier types.

²¹ For example, A. R. Bellinger, *Essays on the Coinage of Alexander the Great*, ANSNS 11 (New York, 1963), pp. 4–13, presents arguments for various sculptural sources of the Athena obverse type of Alexander's staters. He believes the model was the Athena Promachus by Pheidias.

without the large investments of royal patronage or that of many wealthy merchants which supported the Buddhist and Jain workshops brahmanical sculpture may have been able to develop with greater flexibility.

Finally, during the reign of Vāsudeva I, Kuṣāṇa power began to decline, and the focus of activity as recorded in inscriptions became restricted to northern India.²² Paralleling this shift in power, the reverse types of Vāsudeva's coins seems to have "retrenched," returning to the type used by Vima. On the first of Vāsudeva's coins illustrated here (Plate 31, 8) even the exaggerated musculature of the earliest Śiva types has returned. The second coin (Plate 31, 9) demonstrates the influence of the Indian types of Huviṣka, for example the head is tricephalic. And the third coin (Plate 31, 10) best exemplifies the syncretism of Vāsudeva's types. Here, the old Śiva-Nandi type is used, but now Śiva has four arms, as he did on the coins of Kaniṣka and Huviṣka. And on all three coins, his garment looks like a dhoti, not just a draped cloth. It may be noted further than in general these types are more refined, the *contrapposto* more convincing, than were those of Vima. Yet the references to Vima's types and the Indianization of Kuṣāṇa art are unmistakable.

Returning to the problem of transition, here we are faced with a pattern of stylistic variation which seems to have paralleled shifts in political power. When Kuṣāṇa power was concentrated in Gandhāra, it might be said that the contemporaneous consensus of opinion about iconography demanded the partially Hellenistic, partially Indian style of Vima's and Vāsudeva's types, as much as it did in Buddhist sculpture of the northwest. When, at its height, Kuṣāṇa power spread east, at least as far as Mathurā, the indigenous consensus required a more Indian type, developed in the coins of Kaniṣka and Huviṣka. Thus, within a relatively well-defined period, the style of at least this type was constantly changing, perhaps varying in order to appeal to the expectations of regionally and culturally distinct groups of people under Kuṣāṇa rule. Further, if these observations are accepted, then it would appear that in this case the artists or die cutters or those who commissioned the production of the coins were conscious of the changes being made in the Śiva types.

²² Rosenfield (above, n. 1), pp. 269–70.

The motivation for the use of the purely Indian Śiva type of Huviṣka's coins is not clear given the scarcity of evidence for sculpture of the same style and period. Yet, the type probably represents a local style, part of a regionally distinct northern Indian cultural tradition. However, the sculptural brahmanical images from Kuṣāṇa Mathurā are not as refined as the images of the coin types. The closest parallels may be found instead in the standing Gupta Buddhas from Sārnāth, Plate 31, 12. The India Śiva coin types may be seen, then, as stages in the transition to a new style of Indian sculpture, a style which may not have been restricted to images of a single religion. Despite the chronological gap between the coins of the Kuṣāṇas of the second century and the fifth century Gupta Buddhas, the coins offer evidence of a transition to a new Indian style based on earlier traditions. In the Kuṣāṇa Śiva types we catch a glimpse of what was to come — the reorganization of old ideas, together with the addition of new ones, culminating in the classic style of Gupta sculpture.

THE OTTOMAN COINAGE OF TILIMSĀN

(PLATE 32)

MICHAEL L. BATES

The conquest of Oran by the Spanish in 1509, and of Algiers by the Ottomans in 1516, left the Ziyānid rulers of Tilimsān (modern Tlemcen, in northwestern Algeria) at the mercy of the two major powers. During the next 42 years, six Ziyānids succeeded one another as nominal rulers, dependent in fact on Spain or the Turks. In 964 H./A.D. 1556 the pretense of Ziyānid sovereignty was abandoned by the Ottomans, who installed a governor in Tilimsān. There followed a series of remarkable gold coins, until after 1012/1603, struck in the names of the Ottoman sultans but quite different from ordinary Ottoman coinage.

Recently Henri Arroyo published an excellent study of these issues,¹ but unfortunately his information on the examples in the American Numismatic Society, provided to him long ago by the present author, is not completely accurate.² The ANS has two important Ottoman coins

¹ H. Arroyo, "The Ottoman Coinage of Tilimsān," *Oriental Numismatic Society Occasional Paper* no. 12 (January 1979).

² Mr. Arroyo wrote to me in 1971 and again in 1972, asking for information on Tilimsān Ottoman coins in the ANS and enclosing photographs of his coin of Muḥammad III. The information sent to him was derived from the attributions of my predecessors E. T. Newell, Howland Wood, and George C. Miles. At that time, being new to the Society's staff and to Islamic numismatics, I was unable to help Arroyo with certain difficult inscriptions on the coins, other than to share his doubts about previous readings. I did not then know of two Tilimsān coins of Sulaymān Qānūnī in the ANS cabinet, and since Arroyo did not suspect their existence, he could not ask me about them. Later, in 1974, Robert Doran wrote me with some very specific questions about the legends of the Sulaymān coins, which he had seen on a previous visit. That letter and subsequent correspondence resulted in my deciphering, with the help of Miles, the inscriptions on all the ANS pieces. Unfortunately, by this time Arroyo's inquiry had been forgotten, so that I neglected to inform him of the new discoveries. Mr. Doran was to have published the results in a projected general survey of Ottoman coinage, but this work has been long delayed.

of Tilimsān not known to Arroyo; furthermore, after the information was sent to him, all the ANS coins were more accurately attributed, and their legends fully read. Some other additions to Arroyo's corpus may also be made. It therefore seems appropriate to restudy the corpus, while acknowledging an indebtedness to Arroyo's useful work.

The coins to be described are all of gold, perhaps somewhat debased, and all have horizontal field inscriptions enclosed in a double square, which is in turn surrounded by a circle touching the square at the corners and an outer circle of dots. The sectors between the circle and square contain the mint and date. This general design was introduced in the twelfth century by the Muwahhids and was standard for all Maghribī gold coinage until the seventeenth century. When the Ottomans took Algiers, they replaced its former coinage with standard Ottoman issues, but at Tilimsān the coinage maintained Ziyānid precedents. This may reflect a difference in the administrative status of the two places, but the nature of Ottoman rule at Tilimsān does not seem to have been studied.

SULAYMĀN I, 926–74/1520–66

The earliest coins of Tilimsān with an Ottoman connection are two issues attributed by Hazard³ to Ziyānid puppets, but acknowledging the Ottoman Sulaymān I Qānūnī. It is questionable, however, whether the Sulaymān named on the coins is really the Ottoman, and other scholars have assigned these issues to an earlier date. As Arroyo suggests, the attribution is at best tentative; these issues will not be considered here.

There are two coins of the Ottoman Sulaymān from Tilimsān in the American Numismatic Society, hitherto unpublished. These should probably be assigned to the period following the appointment of an Ottoman governor in 964/1556 and before Sulaymān's death in 974/1566.

³ Harry W. Hazard, *The Numismatic History of Late Medieval North Africa*, ANSNS 8 (New York, 1952), pp. 190–91, nos. 670–71.

1. Date?

Obv.:

سلطان سليمان
شاه سلطان
بن
سلم شاه خان
عز نصره وامره
سنة ٩٢٦

Rev.:

ضارب النضر
صاحب
العز والنضر
في البر والبحر

Margin:

.... | بمدينه | تلمسان | المحروسة؟ | | | سنة؟ ... | وعشرين؟ | وتسعمائة |

Margin:

ANS, Newell, 1917;⁴ 4.290 g, 32 mm; Plate 32, 1.

The inscriptions in the field of this coin are taken from the regular gold coinage of Sulayman, except for the addition of the words *wa-amrahu*, “and his command,” on the obverse. The date 926 in ciphers in the obverse field is probably not the actual date of issue, but rather Sulaymān’s accession date, as on his regular issues. The date in words in the margin may also be 926, but only the century is clear. The visible traces of the decade would also permit *sillīn* or *sab’īn*, sixty or seventy. If so, this would be the true date of issue. The honorific *al-maḥrūsa*, “the guarded (by God),” after the mint name reflects Ottoman practice at some mints, but may be compared to the Ziyānid phrase *ḥarasahā Allāh*, “may God guard it,” which often follows mint names. To generalize, it appears that the authority who determined the legends of this coin knew something of Ottoman practice, but the peculiar epigraphic style and the general design of the coin indicate that the die engraver had been an employee of the Ziyānid mint.

⁴ All the ANS coins are from the E. T. Newell collection and were purchased by him in Algiers.

2. Date effaced.

Obv.:

سلطان سليمان
بن سليم خان
صاحب العز
والنصر في البر والبحر

Rev.:

سبحان الملك
المعبود الذي
لطفه موجود
ومن توكل عليه
فهو مسعود

Margin:

|.....ه|مسه|.....|.....|

Margin:

|.....ه|وتسع ه|.....|

ANS, Newell, 1917, 2.103 g, 26 mm; Plate 32, 2.

Since the marginal legends are almost completely effaced, this coin is attributed to Tilimsān only on the basis of its style, which is distinctive enough to leave no room for doubt. It seems likely, because of its features in common with the coins to follow, that this issue came after no. 1. The reverse field legend may be translated "Praise to the King who is worshipped, whose benevolence is everlasting, and whoever relies on Him will be happy." Such a long religious inscription is unparalleled on Ottoman coinage (except at Tilimsān), but long and greatly varied religious statements are a common feature of the coinage of the Ziyānids and other Maghribi dynasties from the time of the Muwaḥḥids. This one however is still more remarkable because it is in *sajʿ*, rhymed prose: *al-maʿbūd, mawjūd, masʿūd*. Rhymed prose, a succession of short phrases ending in the same final syllable, is common in late Arabic literature, but is seldom seen on coins.⁵ It is indeed the recognition that these inscriptions are rhymed that enables and confirms their decipherment on this coin and on the ones to follow. It is doubtful whether the inscription on this coin has any particular significance except as a banal expression of piety; one can even say that it exemplifies the straining of sense for the benefit of rhyme which is an all too common defect of *sajʿ*.

⁵ An early example of the use of *sajʿ* is the first issue of the Fatimid al-Muʿizz, struck 341–43/953–55, e.g. George C. Miles, *Fatimid Coins*, ANSNM 121 (New York, 1951), no. 48. Rhyming titles are fairly common, as, obviously, the Ottoman title *Sulṭān al-barrayn wa-khḥāqān al-baḥrayn*, a double rhyme.

SALÎM II, 974–82/1566–74

3. 974 H.

Obv.:

صاحب النضر
والعدل والامان
السلطان
سالم ابن
السلطان سليمان

Rev.:

مالك البرين
والبحرين والشام
والعراقين خلد
الله ٨٨ ملكه

Margin:

| خمس عشر | قيراط | عز نصره | ٩٧٤ |

Margin:

| سنة اربعة | وسبعين | وتسعمائة | تلمسان |

İstanbul Arkeoloji Müzeleri, 4.20 g, 32 mm. Halil Edhem, *Muze-i Humâyûn: Maskūkât-i qadîme islâmiyeh qatalôghî*, 6: *Maskūkât-i 'usmâniyeh*, 1 (Constantinople, 1334/1915–16), no. 1109, pl. 9; Remzi Kocaer, *Osmanlı Altınları* (Istanbul, 1967), no. 88; İbrahim and Cevriye Artuk, *İstanbul Arkeoloji Müzerleri Teşhirdeki İslamî Sikkeler Kataloğu*, 2 (Istanbul, 1974), no. 1602, pl. 68.

As Arroyo recognized, the three authors refer to one and the same coin. The second word of the second line of the obverse is very casually inscribed. The three authors cited transcribe it *sāmān*, without suggesting what this might mean. Arroyo tentatively suggests rather *khāqān*, one of the titles of the sultan, but this does not seem to fit grammatically either with what precedes or with what follows (in either context, it should have the definite article). A more plausible reading is *al-imān*, which fits with the preceding words. “Lord of (divine) assistance and justice and *faith*.” Moreover, it rhymes with the last word of the obverse field, “Sulaymān.”

The words “fifteen qīrāṭs (carats)” in the obverse margin are not easy to understand. If they refer to the weight of the coin, one obtains the value $4.20 \div 15 = 0.28$ g for the weight of one qīrāt, which is rather high.

Possibly they refer to the fineness of the coin, that is 15/24 gold, or to the weight of gold in it as opposed to its total weight. The phrase is unparalleled on Islamic coins.

The reverse field legend, which occurs also on the coins that follow, may be translated "Ruler of the two lands and the two seas and Syria and the two Iraqs, may God preserve his rule." This is a conflation of several titular elements often seen on standard Ottoman coins. *Al-ʿIrāqayn*, "the two Iraqs," probably refers to medieval al-ʿIrāq, the southern part of Mesopotamia, and al-Jazīra, the northern part. The two were considered separate provinces until modern times, but the use of the term here is probably for no other reason than to make the rhyme with *al-barrayn waʿl-baḥrayn*. It must have been frustrating for the die cutter that there was no possible justification for *al-shāmayn*, "the two Syrias." The last line of the reverse is interrupted in the middle by a knotted ornament. Different ornaments will be seen on the subsequent coins in the same position, probably without any significance.

MURĀD III, 982–1003/1574–95

Arroyo lists a coin of Murād III with the date 978, citing Schaendlinger, but this must be a typographical error. The date is before Murād's reign, and the only Tilimsān coin mentioned by Schaendlinger is dated by him to 988 (below, no. 4e).

4. 983 H.

Obv.:

صاحب
العدل المقيم
السلطان مراد بن
السلطان سليم

Rev.:

مالك البرين
والبحرين والشام
والعراقين خلد
الله نفا ملكه

Margin:

| سنة | ثلاثة | وثمانين | وتسعمائة |

Margin:

| سنة ثلاثة | وثمانين | وتسعمائة | سهساب |

- a. National Museum, Copenhagen, 3.52 g, 30 mm, Plate 32, 4a: Stanley Lane-Poole, "The Oriental Cabinet at Copenhagen," *NC* 1876, p. 271, no. 5; J. Østrup, *Catalogue des monnaies arabes et turques du Cabinet Royal des Médailles du Musée National de Copenhague* (Copenhagen, 1938), p. 295, no. 2545.
- b. British Museum, 4.260 g, 32 mm: Stanley Lane-Poole, *Catalogue of Oriental Coins in the British Museum, 8: The Coins of the Turks. . . , Class XXVI* (London, 1883), p. 97, no. 256, pl. 4.
- c. State Historical Museum, Moscow, no. 41A, 4.160 g, 34 mm: Cüneyt Ölçer, *Sovyet Rusya Müzelerindeki (Moskova ve Leningrad) Nadir Osmanlı Madeni Paraları* (Istanbul, 1972), p. 7, no. 2.
- d. State Historical Museum, Moscow, no. 41B, 2.100 g, 25.6 mm: Ölçer, p. 8, no. 3.
- e. München Staatliche Münzsammlung, 4.27 g, 35 mm: Anton C. Schaendlinger, *Osmanische Numismatik* (Braunschweig, 1973), pl. 2, no. 30; see also pp. 71, 103.
- f. Sotheby, 23 April 1980, no. 158; last segment of reverse margin has *Madīnat Tilimsân*.

The date of this issue has also been read 988 H. Lane-Poole read the date of the Copenhagen coin as 983. When he saw it, it was in a private collection in Copenhagen, but in the same year his article appeared or the following year, the National Museum cabinet acquired a Tilimsân coin from a Danish collector, Nielsen.⁶ This must be the same coin, although it was read 988 by Østrup. Lane-Poole also dated the BM Tilimsân coin 988, but the date on it is partially effaced. Comparison of it with the Copenhagen specimen suggests strongly that the date is the same on both. The Munich coin, dated 988 by Schaendlinger, is similar to the other two. The date can be seen clearly only on the Copenhagen and Sotheby examples, and 983 is evidently preferable on both despite the barbarity of the script.

⁶ Information provided by Anne Kromann, Assistant Keeper in the Royal Coin Cabinet. I am grateful to her and to Otto Mørholm for providing me with a photograph of the coin.

The obverse field inscription of Murād's Tilimsan issues is not easy to decipher. The second word of obverse line 2 is especially problematic. In the earliest publications, *al-mu'ayyad* and *al-mu'min* were read, but Lane-Poole, in 1883, suggested *al-mustaqīm*, which has since been accepted. It would, however, be better to read *al-muqīm*. On the coin, the *mīm* and *qāf* are linked by a smooth line; Arabic orthography would permit the letter *sīn* to be represented by such a line, but if the word is *al-mustaqīm*, there ought to be a tooth for the letter *lā'*. Either word would be suitable in the context: *al-muqīm* means "permanent, enduring, while *al-mustaqīm* means "straightforward, upright." Note the rhyme of *al-muqīm* with *Salīm*.

5. 989 H.

Described as similar to no. 6 below, of 995 H.

Soret collection: F. Soret, "Lettre à . . . de Dorn. Troisième lettre sur les médailles orientales inédites de la collection de M. F. Soret," *RNB* 1856, p. 172, no. 177.

6. 995 H.

Obv.: As no. 4.

Rev.: As no. 4, but symbol Y in line 4.

Margin:

Margin:

هعامه | خمس | وتسعينه | وتسعمائة | عامه | خمسة | وتسعينه | هوسعمائة | ٥

- a. Soret collection: Soret, *RNB* 1856. p. 172, no. 178, pl. 2, no. 16.
- b. Arroyo collection: Michael Mitchiner, *Oriental Coins and Their Values: the World of Islam* (London, 1977), p. 207, no. 1261, illus.; Arroyo, p. 3, fig. 2.
- c. ANS, Newell, 1917, 4.140 g, 35 mm; Plate 32, 6c; symbol √
- d. ANS, Newell, 1917, 4.132 g, 33 mm; Plate 32, 6d; same reverse die as c.
- e. Sotheby, 23 April 1980, no. 159; symbol ✕.

This issue bears no mint name, but is confidently attributed by its resemblance to no. 4 above. The word *sana*, "year," is replaced by its synonym *'ām*, a common feature of North African coins.

Möller published one other Tilimsān dinar of Murād III in 1831.⁷ Since the marginal legends were effaced, it cannot be assigned to any of the issues listed above. Judging by Möller's description, the word *al-sulṭān* in the middle of the obverse field was omitted, but this may be only his mistake.

MUḤAMMAD III, 1003–12/1595–1603

7. 1003 H.

Obv.:

صاحب النصر
والا سعاد الذن
يفر ضر الجماد
السلطان محمد بن
السلطان مراد

Rev.: As no. 4, but symbol √
in line 4.

Margin:

| عام | تات | عوم | والف | هـ |

Margin:

| عام | تات | عوم | والف |

- a. Arroyo collection: Mitchiner, p. 207, no. 1266; Arroyo, pp. 3–4, fig. 3.
- b. ANS, Newell, 1917, 4.205 g, 33 mm, Plate 32, 7b; symbol √.
- c. Sotheby, 23 April 1980, no. 160; symbol ٢. Digit *tāt* on obverse.
- d. Sotheby, 23 April 1980, no. 161. Same dies as b.

The marginal inscriptions of Arroyo's coin are mostly effaced. The issue is therefore dated by the ANS coin, which was originally assigned to 1013 H., probably because the word in the bottom segment was first read '*ashr*, "ten." Although the word is clearly 'WM, especially on the obverse, one can understand how it could be misread, for in standard

⁷ J. H. Möller, *De numis orientalibus in numophylacio gothano asservatis commentatio altera* (Erfurt and Gotha, 1831), pp. 53–54, nos. 565–66.

Arabic it has only one meaning, "swimming," which makes no sense on a coin. In fact, it is probably to be understood here as a plural of the word *'ām*, "year." The normal plural of *'ām* is *a'wām*; 'WM on this coin may be either a misspelling, with the two *alifs* omitted, or a dialectical variant. This is not the only barbarism of the date inscription. The number three is clearly written on the obverse *lālīl*, with two points over the first and last letters. In standard Arabic, these letters should be *tha'*, with a triangle of three points over each, but spoken Arabic commonly changes the difficult *th* sound to *l*, a pronunciation no doubt represented here. Furthermore, *lālīl* or *thālīth* is not literally "three," but rather "third." On the reverse, the word is even more distorted, appearing as *lāt* with the *lām* omitted. In sum, the date legend is to be read literally "year third year and a thousand," a construction as barbarous in Arabic as in English.

The honorific on the obverse may be translated "The lord of help to victory and help to good fortune, who makes the *jihād* a duty, the Sultan Muḥammad son of the Sultan Murād." Note again the rhyme of *is'ād*, *jihād*, and Murād.

AḤMAD I, 1012–26/1603–17

A Tilimsān coin of Aḥmad I was published a century and a half ago, but it has until now not been recognized as such. It was described by Möller in 1831, with the attribution "Africani incerti." Soon afterward, Soret suggested its attribution to an unknown Sharif of Morocco.⁸ Möller's reading of the legends is quite inaccurate, but his transcription of the reverse field inscription is sufficient to identify the coin as an Ottoman Tilimsān issue, and it is unlikely that he was wrong in reading the name Aḥmad b. al-Sulṭān Muḥammad on the obverse. The attribution to Aḥmad I is in any case confirmed by the recent discovery of a second Tilimsān coin of Aḥmad, which also enables the correct decipherment of Möller's transcription of the inscriptions of his coin.

⁸ Möller (above, n. 7), p. 54, no. 567; Soret, *RBN* 1856, p. 172.

8. Date illegible.

Obv.:

صاحب العبد
النفر المؤيد
ابو العاتس (?)
احمد بن
السلطان محمد

Rev.:

مالك البرين
والبحرين و الشام
والمغاربة خلد
الله ملكه

Margin: effaced.

Margin: effaced.

Möller, p. 54, no. 567 = Soret, *RBN* 1856, p. 172.

The inscriptions are given here as transcribed by Möller, but with the help of the coin to be described next, there is little difficulty in reconstructing the actual text. The reverse field is easily recognizable as the standard reverse of Aḥmad's predecessors. The reading *al-maghrāba* for *al-'iraqayn* was usual in descriptions of Tilimsān coins until it was corrected by Lane-Poole. For the first two lines of the obverse, see the reverse of the coin next to be described. The third line, transliterated "Abu'l-âtas (?)" by Möller, is a surprise. Soret's suggestion Abu'l-Fāris is still unsatisfactory. Neither of these was Aḥmad's *kunya*, and indeed the Ottoman Sultans never used their *kunyas* on coins (although Maghribī rulers often did). One must assume that the word on the third line was *al-sulṭān*, but perhaps so mangled by the die engraver as to make it incomprehensible to Möller.

9. 1012 H. ?

Obv.:

ن
السلطان
احمد بن
السلطان محمد

Rev.:

صاحب
العدل النضر
المؤيد

Margin:

Margin:

|عام|...|عشر|الف| |عام|...|عشر|الف|

Album collection; 2.068 g, 26 mm; Plate 32, 9.⁹

⁹ I am grateful to Stephen Album for allowing me to study and publish this coin.

The engraving of this coin, the latest of the series, is worse than any so far described. In particular, the marginal legends must be mostly inferred rather than read. *ʿĀm* and *alf* are perhaps clear enough, at least in the light of the coins previously described; it may be presumed that the rest of the date was *ithnā ʿashr*, assuming the coin to bear the date of Aḥmad's accession. The obverse field inscription presents no difficulty. The reverse inscription corresponds to the first two lines of the obverse field inscription on Möller's coin. The second word, following *ṣāḥib*, is easily read as *al-ʿadl*; Möller's reading *al-ʿabd* is an error common to all early nineteenth-century descriptions of Tilimsān coins. The third word is more problematic. Möller's reading *al-naḥar* is understandable from the ductus of the letters, but impossible in meaning. A *naḥar* is a person, individual, in a very mundane abstract sense. For example, in modern military usage, it means simply "a soldier" or even specifically "a private," the lowest military rank. Besides, the absence of the conjunction *wāw*, "and," after *al-ʿadl* indicates that the following word must be an adjective describing *al-ʿadl*, not a substantive noun. One may rather suggest *al-naḍir*, "brilliant, radiant," an adjective related to the noun *al-naḍr* that appears on the first coin described above. *Naḍr* means "pure gold or silver," but only because these metals are brilliant and shining. The fourth word, *al-muʿayyad*, "assured, confirmed," is obvious. The title in full may therefore be translated "Lord of radiant assured justice." Note, finally, that there is once again a triple rhyme, *al-muʿayyad*, *Aḥmad*, *Muḥammad*.

SOME DOCUMENTARY EVIDENCE ON THE RESTRIKING OF EARLY PAPAL MEDALS

JOHN L. VARRIANO

The most vexing problem faced by the collector or curator of papal medals is that of distinguishing restrikes from original emissions. Until now, our knowledge of the restrikes was limited to those medals reissued by the papal mint in the nineteenth century of which examples are currently on display in the Museo Numismatico della Zecca Italiana, in Rome. A catalogue of these medals was published in 1824 by the mint's superintendent Francesco Mazio, and they were later illustrated in the *Relazione della reale zecca* of 1940.¹ Although these late strikes are not self-identifying, either by inscription or any unvarying physical traits, they do possess some recognizable characteristics that become evident after careful examination.²

Numismatists often blame Mazio for his insensitivity in restriking these medals. As one might expect from a commercial operation aimed at the general public, the *fallura* of his restrikes is not of the highest quality. But a more serious objection has also been raised concerning his

¹ F. Mazio, *Serie dei conii di medaglie pontificie da Martino V a Pio VII esistenti nella pontificia zecca di Roma* (Rome, 1824); Ministero delle Finanze, *Relazione della reale zecca*, Appendix 3, "Raccolta pontificia" (Rome, 1940). The latter publication, hereafter cited as *R.Z.*, was privately reprinted in 1976 by Edward Jencius of Brooklyn, New York.

² I have discussed the connoisseurship of papal medals in my introduction to the exhibition catalogue *Roma Resurgens: Papal Medals from the Age of the Baroque* (Ann Arbor, 1981). In general, the most common but by no means universal characteristics of the nineteenth-century restrikes are the presence of die breaks, surface flaws, sharp unsubtle cutting, dull, dark patination, and, especially for pre-eighteenth century medals, a thick lenticular profile with coarsely ground edges.

practice of arbitrarily combining obverse and reverse dies to form new hybrid medals. The existence of such mules poses enormous problems when the original obverse/reverse combinations are not known. Only for some medals, the so-called *annuali* or annual medals issued each year on the Feast of Ss. Peter and Paul, do we have the benefit of Bartolotti's painstaking researches in the Archivio della Camera Apostolica, but then only for the years after 1605.³ Our two major early bibliographic sources, Bonanni and Venuti, are likewise of limited help.⁴ Since Bonanni failed to reproduce obverses and Venuti is without reproductions altogether, we have in many cases no clear idea of what the original medals looked like, how faithful the restrikes were in duplicating them, and worst of all, how we can tell one from the other.

It is not the intention of this study to pass further judgement on Mazio's practices, but rather to fill in some of the background leading to his reuse of the pre-nineteenth-century papal dies. Until the 1790s, dies for papal medals did not become the possession of the *zecca* after the original edition was struck, but instead remained in the hands of the medalists, who were free to continue striking them for their own profit. Through inheritance or purchase, many medalists also owned dies of previous manufacture whose reuse was equally unrestricted. There is no evidence as to the number of such "lifetime" or relatively early unauthorized strikes that were produced, nor any way that they can be easily distinguished from the original edition commissioned by the Vatican. As a rule of thumb, one can assume that only the official emissions were struck in gold and silver while the privately struck examples were made of bronze. However, some official medals were also struck in bronze as is evident from records preserved from the reigns of Urban VIII (1623–44) and Innocent X (1644–55).⁵ During the years 1629–51, the only period when we know the quantities issued in all three metals, the breakdown on average is 200 gold, 380 silver, and 100

³ F. Bartolotti, *La medaglia annuale dei romani pontefici da Paolo V a Paolo VI (1605–1967)* (Rimini, 1967).

⁴ F. Bonanni, *Numismata Pontificum Romanorum quae a Tempore Martini V usque ad Annum MDCXCIX* (Rome, 1699); R. Venuti, *Numismata Romanorum Pontificum a Martino V ad Benedictum XIV* (Rome, 1744).

⁵ These records have been published for the annual medals from 1605 through 1859 by F. Bartolotti (above, n. 3), pp. 2–282.

to 200 bronze. Unfortunately we have no way of knowing if equal numbers of bronze medals were issued in other pontificates as well. Thus, the precise provenance of very fine (thin, subtly struck, well patinated) bronze medals is destined to remain a mystery.

The earliest evidence we have for the practice of restriking papal dies comes from the early seventeenth century. In the testament of Gaspare Mola, chief die engraver at the papal mint from 1625 until his death in 1640, an interesting disposition is made in favor of his nephew and successor Gaspare Morone. Dated August 5, 1631, the testament leaves to Morone "all of my die-stamps, dies, and metals engraved by me . . ." noting that "my nephew should take particular care and protection of this legacy for making medals . . . of my invention."⁶ After Morone himself died in 1669, the Mola inheritance seems to have remained intact, and possibly in use, for some time to come. In Bonanni's *Numismata Pontificum Romanorum* of 1699, "Mola" is listed as the owner of most of the medals (not dies) described between the pontificates of Martin V (1417–31), the first pope to issue medals, and Innocent XII (1691–1700).⁷ It would thus appear that an as yet unidentified member of the family not only preserved, but actually augmented the collection of medals between the death of Morone and the publication of Bonanni's book. Since the papal medalists during the years 1669–99 were Girolamo Lucenti, Gioacchino Travani, and Alberto and Giovanni Hamerani, it is unlikely, however, that the collection was enriched with new dies as well as medals, or that the older dies continued to be struck.

The last notice we have of the Mola-Morone collection comes from the introduction of Venuti's *Numismata Pontificum Romanorum* of 1744. There we learn that the great German numismatist and antiquarian Baron Philipp von Stosch purchased the collection from heirs of the family.⁸ If true, such a purchase would probably have taken place in

⁶ Archivio di Stato, Rome, Notari Tribunale dell' A.C., Fonthia, Testamenti 1638–42, vol. 28, fol. 363r. The document was cited, but neither transcribed nor collocated, by A. Bertolotti, "Giacomo Antonio Moro, Gaspare Mola, e Gaspare Morone-Mola," *Archivio storico Lombardo* 4 (1877) pp. 305–7.

⁷ F. Bonanni (above, n. 4), vol. 2, pp. 841–58.

⁸ R. Venuti (above, n. 4), pp. xxvi–xxvii.

1715–17 or 1722–31, the years when Stosch was living in Rome.⁹ The final whereabouts of the dies is uncertain, but they may have passed ca. 1750 from Stosch to the papal medalists Hermenigildo and Ottone Hamerani. The Hamerani brothers are known to have formed a collection of early dies sometime before Hermenigildo's death in 1756, and it is quite possible that the bulk of these came from the debt-ridden Stosch prior to that date, but after Venuti's publication in 1744.

A large *fondo* of documents in the Archivio di Stato in Rome sheds some light on the Hamerani's own restriking operation and its link with that conducted by Mazio at the papal mint in the nineteenth century.¹⁰ At the time of Ottone's death in 1761, we learn that the family was so deeply in debt that Ottone's son Ferdinando was forced to consider the sale of their die collection in order to raise dowries for his three sisters and repay various creditors. After an initial effort to sell the dies to the Camera Apostolica failed in 1762–63, Ferdinando tried again in 1764 by threatening to sell them to an undisclosed buyer outside the country. The petition which accompanied this second effort is most revealing as it gives the history of payments and perquisites received by earlier medalists and provides a detailed list of the 673 papal dies then in the Hamerani collection. Of these, 355 were the work of earlier medalists that had been purchased by the brothers Hermenigildo and Ottone. The restriking of these as well as dies of the family's own manufacture seems only to have been done for private patrons, and obviously at less profit than what was hoped to be realized through the sale of the entire collection. Of their patrons, only the King of England is identified by name.

Eventually the Hamerani dies were sold to the Camera Apostolica, but not until very lengthy discussions and valuations had taken place. The first valuation that is preserved is that of the famed antiquarian Johann Winckelmann whose manuscript of ca. 1764 carefully lists each die and evaluates both its condition and overall quality. Winckelmann's valuation of the dies was 21,985 scudi, but this figure seemed too high to the prospective purchasers and a second valuation was sought from an "anonymous" appraiser elsewhere identified as a

⁹ The most recent study of Stosch and his collections is L. Lewis, "Philipp von Stosch," *Apollo* 85 (1967) pp. 320–27.

¹⁰ Archivio di Stato, Rome, Camerale 2, Antichità e belle arti, Busta 4, unpaginated.

certain Scaramuccia. Without bothering with a first-hand study of the dies, Scaramuccia's anonymous *perizia* valued them at just 6,552 scudi, or about one-tenth of what the Hamerani were hoping to obtain. It took until 1796 to work out a compromise whereby the Hamerani accepted a cash payment of 7,000 scudi for the collection which then numbered 748 dies. An interesting sidelight of the negotiations was the establishment in 1789 of a shop, leased from the Camera Apostolica for 200 scudi annually, in which Ferdinando (who died later that year) and his sons could sell their restruck medals.

Two significant facts emerge from the Hamerani documents concerning the dies themselves. A perusal of the inventory informs us that on a few rare occasions, the collection contained more than one die for the same reverse. From the pontificate of Alexander VII (1655–67), for example, we find no fewer than three dies for Morone's medals of *Justice and Peace* (R.Z. 250), and *Head of the Savior* (R.Z. 249 and 264), and two each for his *Entrance of Queen Christina* (R.Z. 251 and 252), *Plague Medal* (R.Z. 254), and *Corpus Christi Procession* (R.Z. 271 and 272). The existence of multiple dies from the same die-stamp of course complicates connoisseurship even further since a late strike from one die may be of higher quality than an earlier strike from another. No *punzoni* or die-stamps were included in the sale, however, a fact which at least prevented the purchaser from casting totally new dies.

The various inventories connected with the sale also provide a few clues as to how mules or arbitrary obverse/reverse combinations came to be struck. Since the obverse and reverse dies are always listed (and presumably were preserved) separately, it is apparent that both the Hamerani and the Camera Apostolica were unconcerned with maintaining pairings that were historically accurate. Indeed, both parties were so casual about this matter that the obverse dies were not even individually described, but simply listed by quantity. Furthermore, the inventories also indicate that the Hamerani's collection of earlier dies did not contain equal numbers of obverses and reverses. For the pontificates between Martin V and Gregory XV (1417–1623) there are more than twice as many reverse as obverse dies; for those between Urban VIII and Clement IX (1623–69) slightly less than twice as many; and for the pontificates after Clement X (1670–) when the Hamerani were the principle papal medalists, an approximately equal number of each. With so many early

obverses missing, and such unconcern for their proper mating, it is no wonder that hybrid combinations are common among the restrikes. That the Hamerani almost certainly produced such mules themselves is perhaps the most surprising implication of these documents.

It is not known how long the Hamerani salesroom remained in operation after its founding in 1789. Upon Ferdinando's death in November of that year, the business apparently passed to his son Gioacchino who in 1796 formed a partnership with the new papal medalist Tommaso Mercandetti. Gioacchino in turn died in 1797, and we do not know what role, if any, his brother Giovanni played in running the shop after that date.¹¹

By 1824 Francesco Mazio had firmly taken control of the operation and was selling restrikes through his sale catalogue published in that year. The offerings were now further expanded, however, through the acquisition in 1822 of 193 additional dies from the Barberini Library. This second acquisition is likewise recorded in documents that have recently come to light in the Roman State Archives and the Vatican Library.¹² From these we learn that the collection was formed under Urban VIII who instituted a *maggiorasco* prohibiting their dispersal outside the Barberini family.¹³ Urban clearly foresaw the problems involved in restriking the dies and sought to keep them out of the hands of business-minded medalists, but his distant heir Prince Francesco Barberini (1772-1853) succumbed to the ministrations of the Treasurer General and turned them over to the mint anyway.

Having remained intact in the Barberini Library for nearly 200 years, this second set of dies seems to have been better conserved than the first,

¹¹ On the Hamerani family in general, see F. Noack, "Die Hamerans in Rom," *Archiv für Medaillen und Plakettenkunde* 3 (1921-22), pp. 23-40.

¹² Archivio di Stato, Rome, Camerale 2, Zecca, vol. 27, fascicolo 91 for documents regarding the purchase; Biblioteca Apostolica Vaticana, Cod. Barb. Lat. 3166, fols. 116r-128v for the inventories. I am grateful to Marilyn Aronberg Lavin for her help in locating the relevant Barberini inventories at the Vatican Library.

¹³ It is unclear what role the Cardinal nephew Francesco Barberini (1597-1679) played in Urban's thinking. According to J. Evelyn in *Numismata: A Discourse of Medals Ancient and Modern* (London, 1697), p. 41, the Cardinal "design'd to have made a series of all the popes from St. Peter in medal. . . but . . . dying before it could be executed, that collection remains imperfect."

at least so far as their cataloguing was concerned. The dies, which span the pontificates between Sixtus IV and Urban VIII (1471–1644), are, wherever possible, listed with the correct obverse/reverse pairing. Including 31 duplicates, 106 pairs of dies are so described while additional lists catalogue 43 single dies duplicating ones already in the *zecca*, and 44 others (31 obverses and 13 reverses) whose proper mates were unknown. A second inventory gives the condition of each die and from this we learn that the majority were in “good” or “serviceable” condition with only about one-fourth listed as “unserviceable.” As a kind of coda to these two carefully organized inventories is a hastily scribbled list, whose significance is not made clear, of 17 additional pairs of dies from the pontificates of Urban VIII and Alexander VII.

Mazio’s catalogue of 1824 offered collectors a total of 572 medals restruck from the Hamerani and Barberini dies as well as from a smaller group of 11 dies acquired from the estate of the recently deceased Tommaso Mercandetti.¹⁴ The complete set cost 168.58 scudi and individual medals were priced according to size, elegance of workmanship, and rarity of the originals. The practice of restriking these dies at the papal mint seems to have continued without interruption throughout the nineteenth century. Even after the papal mint was nationalized by the unification government in 1870, the medals remained readily available. As late as 1899, Murray’s guidebook to Rome informed its English-speaking readers that the workshop could be visited with special permission and that the medals could still be purchased, either individually or in the series.¹⁵ Significantly, the series then numbered only 479 medals, a fact doubtlessly attributable to the breakage of dies from heavy use.

By no means all of the dies for early papal medals were collected and restruck by the mint, however. For many pontificates, Mazio’s catalogue lists only a fraction of all the medals originally issued. The number of medals listed in Mazio (and reproduced in the mint’s 1940 pictorial catalogue) as compared with those illustrated in Bonanni’s *Numismata* of

¹⁴ F. Mazio (above, n. 1), p. 5.

¹⁵ (John Murray, publisher), *A Handbook of Rome and Its Environs*, 16th ed. (London, 1899), p. 294. The notice first appears in the 10th edition of 1871, p. 254, and is repeated, one assumes with reason, through all subsequent editions.

1699, in fact, varies considerably. The following table shows the correlation for a few typical pontificates:

<i>Pope</i>	<i>Bonanni</i>	<i>Mazio</i>
Nicholas V (1447–55)	8	3
Paul II (1464–71)	19	4
Leo X (1513–21)	15	3
Sixtus V (1585–90)	43	14
Paul V (1605–21)	40	10
Urban VIII (1623–44)	55	40
Innocent X (1644–55)	29	27
Alexander VII (1655–67)	47	30
Clement X (1670–76)	28	28
Innocent XI (1676–89)	56	28
Alexander VIII (1689–91)	19	8
Innocent XII (1691–1700)	23	17

As might be expected, the correlation is greater for those periods in which the Hamerani were active as medalists or in the unique case of Urban VIII, where the Barberini family made an effort to retain the newly made dies. Dies made by foreign medalists like Cheron or Saint Urbain were much less likely to have remained in Rome, while the entire œuvre of other medalists like Gioacchino and Antonio Travani, G.B. Guglielmada, and Giuseppe Ortolani likewise failed to enter the mint's collection. Occasionally, dies of the Hamerani's own manufacture escaped the restrikers' presses as well. Beatrice's *Pelican Feeding Its Young* for Innocent XII and Hermenigildo's two versions of *Cunctis Clemens* for Clement XI are examples of such dies that never were reissued by the papal mint.¹⁶ The high incidence of dies from the reign of Innocent X—when Gaspare Morone was chief die engraver—tends to support the theory that the Mola-Morone inheritance passed by way of Baron von Stosch to the Hamerani and through them to the papal mint.

The evidence just given does not, of course, solve the problem of how to identify with precision the source of any particular papal medal. In

¹⁶ J. Varriano and N. Whitman, *Roma Resurgens* (above, n. 2), nos. 141 and 149.

fact, the issue becomes still more clouded when we realize that restrikes were being continuously produced by various papal medalists and eventually the *zecca* itself from the early seventeenth century through the nineteenth century. With the documented existence of multiple and unmated dies, the problems of connoisseurship for bronze medals seem insurmountable. The ethical considerations are no less problematic. Bascapé, for example, feels that even the latest restrikes are "legitimate" issues of the papal mint, whereas Bartolotti believes that historically accurate restrikes are acceptable as "copies" but the hybrid specimens are without value and worthy only of destruction.¹⁷

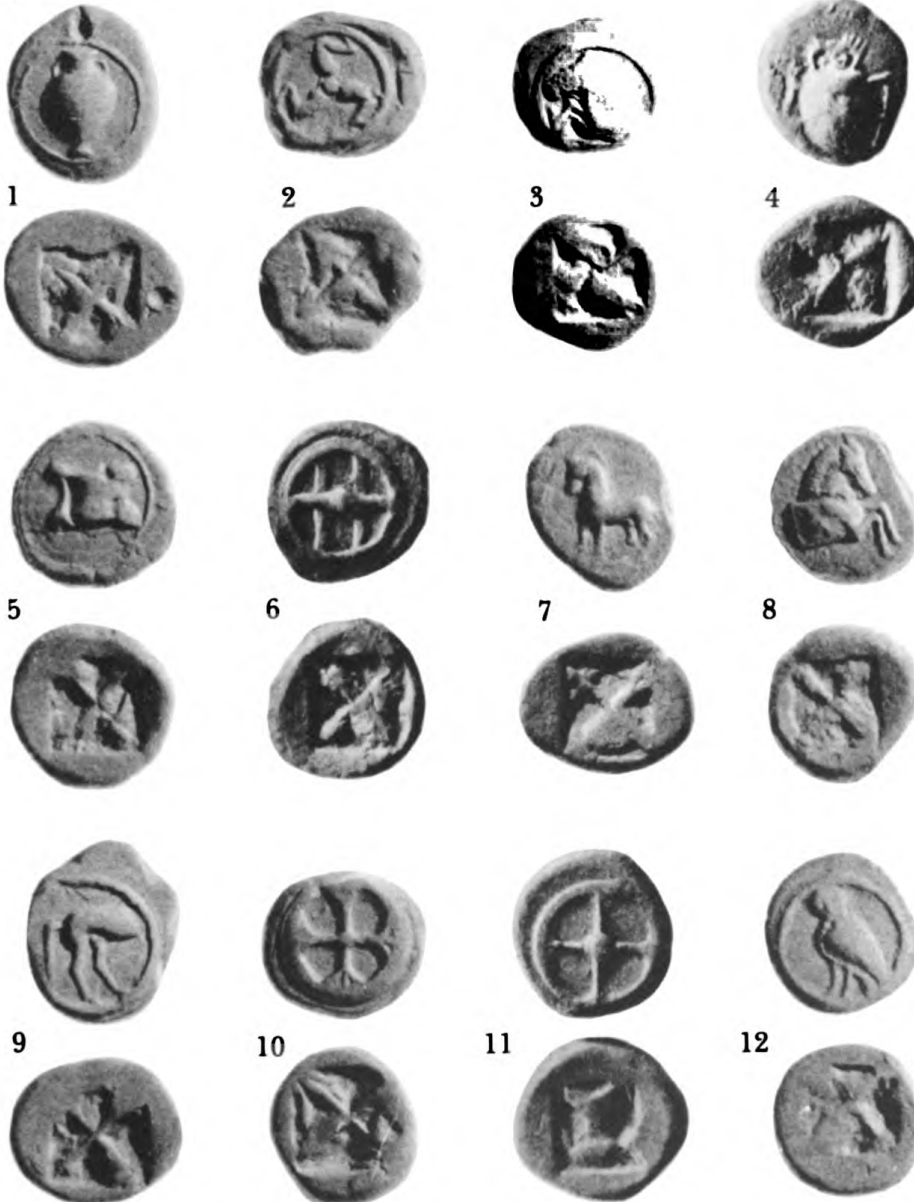
¹⁷ G. C. Bascapé, "Introduzione alla medaglistica papale," *RIN* 1967, p. 175; F. Bartolotti (above, n. 3), preface, p. xi.

PLATES

Plate 1



A



Wappenmünzen, Gorgoneia, Owls

Plate 2



Wappenmünzen, Gorgoneia, Owls

Plate 3



Cavalla Hoard

Plate 4



8



A



B



C



D



9



10



Cavalla Hoard

Plate 5



Cavalla Hoard

Plate 6



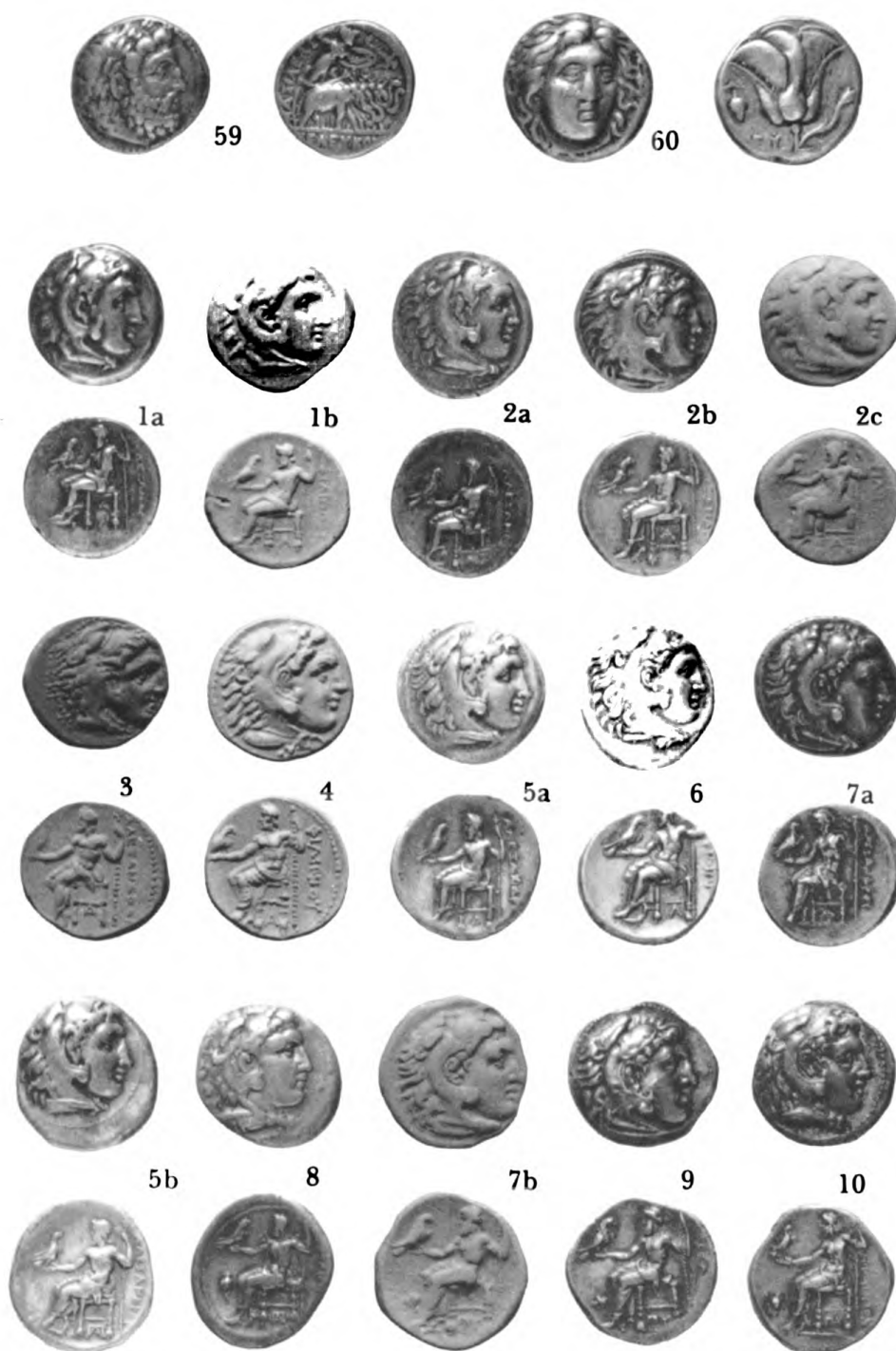
Cavalla Hoard

Plate 7



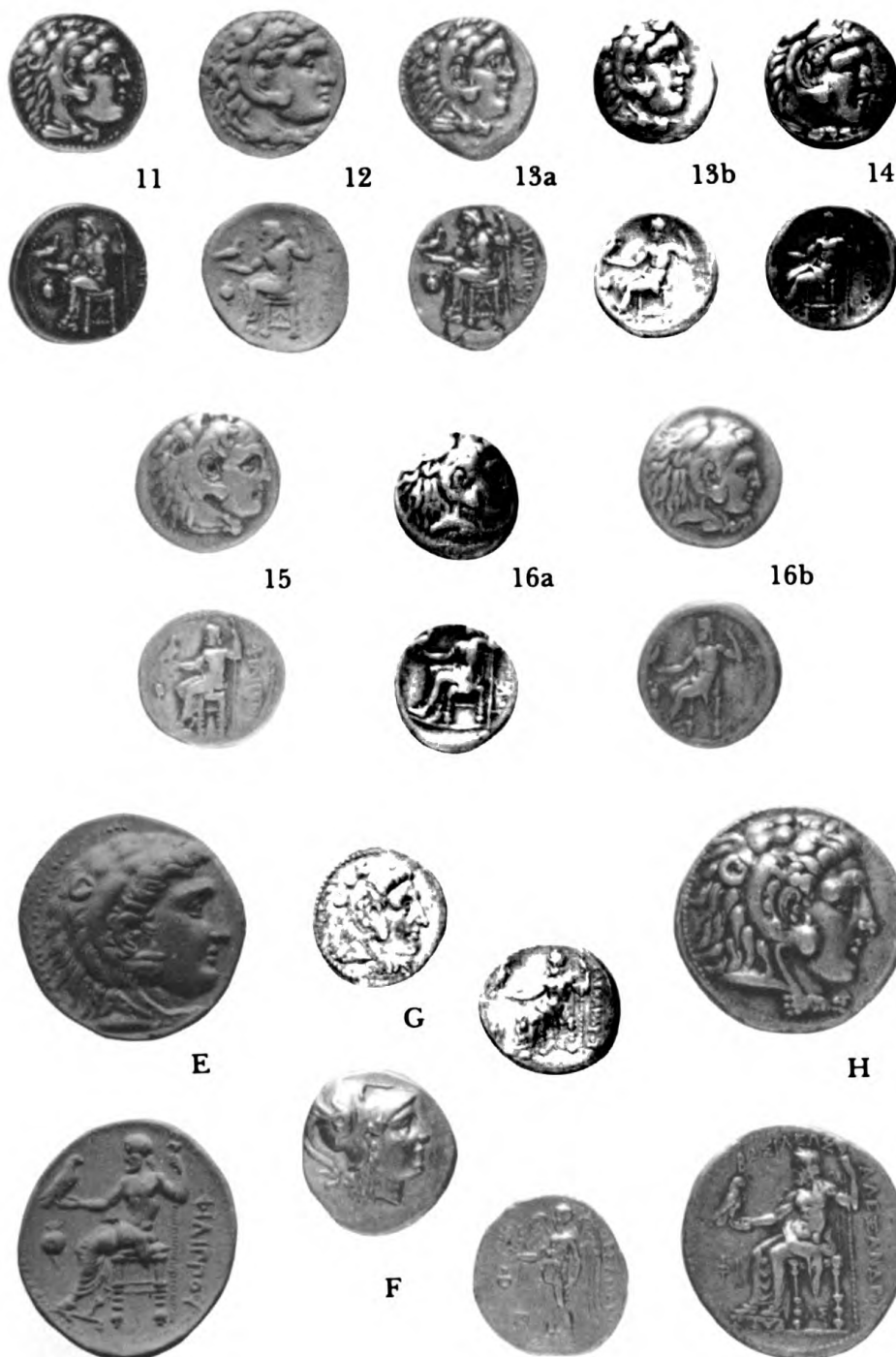
Cavalla Hoard

Plate 8



Cavalla Hoard

Plate 9



Cavalla Hoard

Plate 10



Hoard from Thessaly

Plate 11



Hoard from Thessaly

Plate 12



Hoard from Thessaly

Plate 13



Hoard from Thessaly

Plate 14



536



537



538



552



553



554



555



Hoard from Thessaly

Plate 15



556



557



558



559



560



561



562



Hoard from Thessaly

Plate 16



563



564



565



566



567



571



568



569



570



Hoard from Thessaly

Plate 17



Macedonian Silver of Antigonus Gonatus

Plate 18



8



9



10



11



12



13



14



Macedonian Silver of Antigonos Gonatus

Plate 19



Macedonian Silver of Antigonus Gonatus

Plate 20



Macedonian Silver of Antigonos Gonatus

Plate 21



29



30



31



32



33



34



35



36



Macedonian Silver of Antigonos Gonatus

Plate 22



37



38



39



40



41



42



43



Macedonian Silver of Antigonos Gonatus

Plate 23



Kuh Dasht Hoard

Plate 24



Kuh Dasht Hoard

Plate 25



1-7



15



8



11



16



9



12



17



10



13



18



14



19



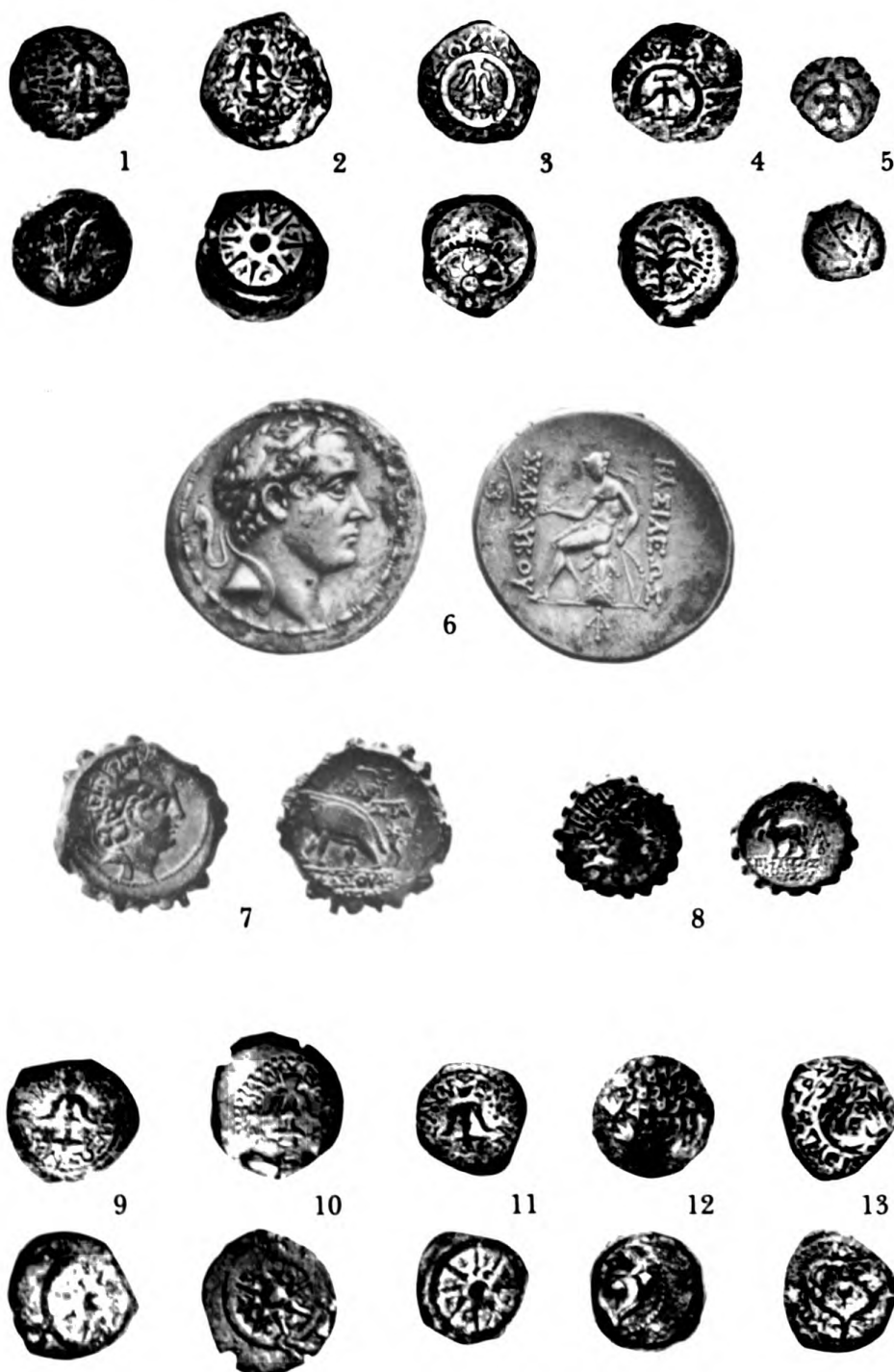
20



21

Kuh Dast Hoard

Plate 26



Coinage of Alexander Jannaeus

Plate 27



C1



C2



C3



C4



C5



C6



C7



C8



C9



C10



C11



C12



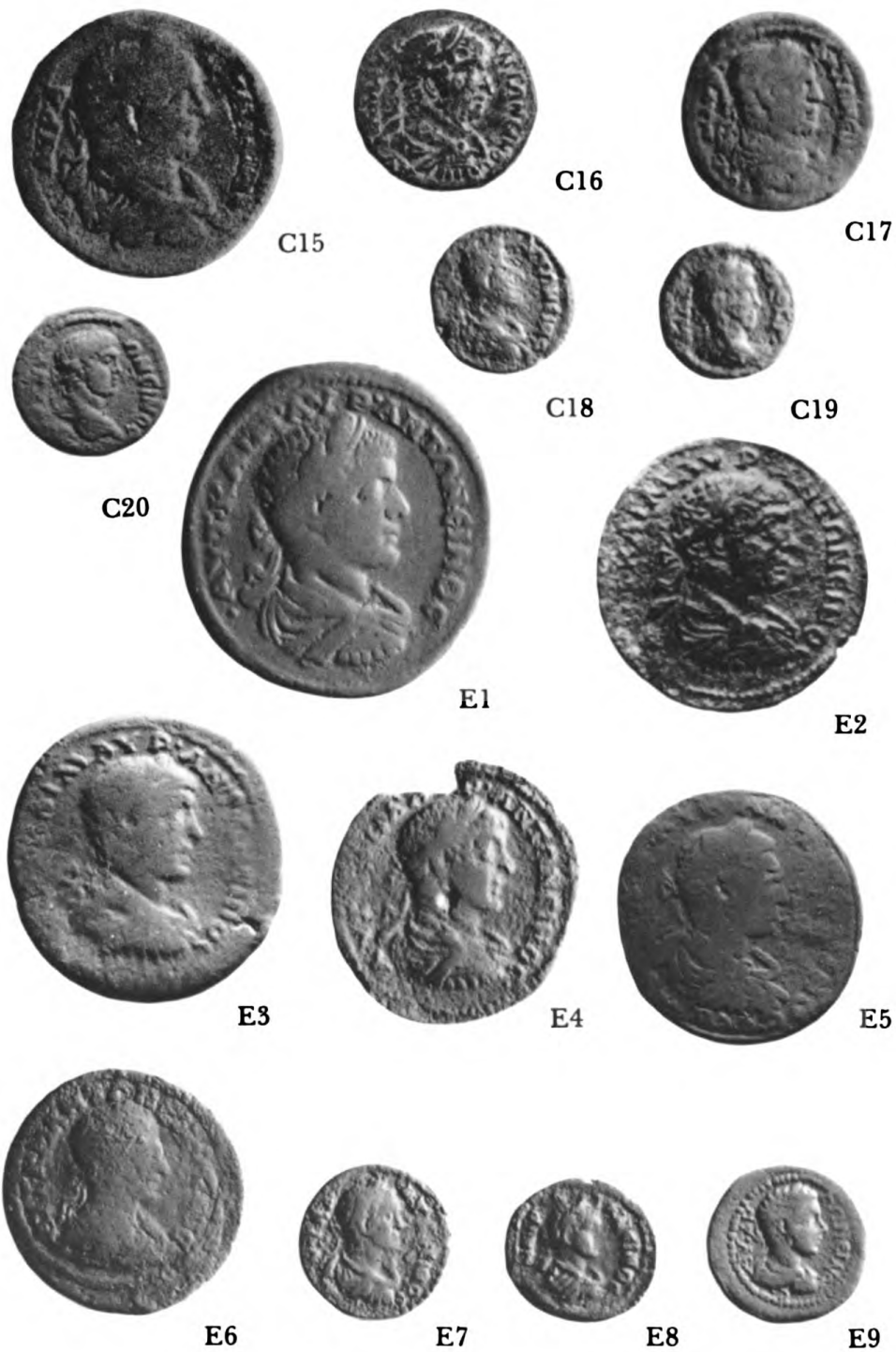
C13



C14

Caracalla or Elagabalus?

Plate 28



Caracalla or Elagabalus?

Plate 29



1



2



3



4

Cistophori of Hadrian

Plate 30



1



2



3



Posthumous Hadrianic Medallions?

Plate 31



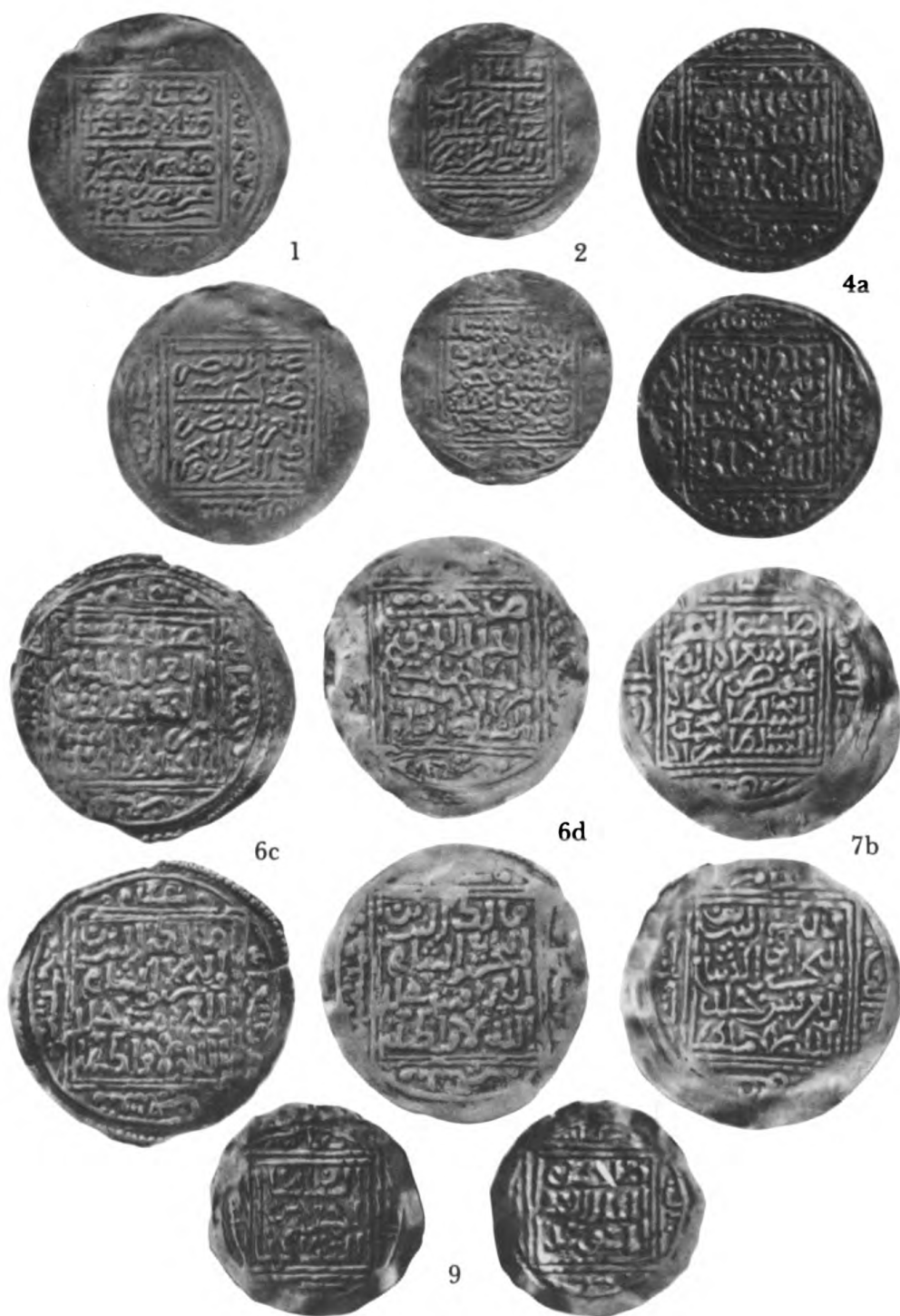
11



12

Śiva on Kuṣāṇa Gold Coins

Plate 32



Ottoman Coinage of Tilimsān

✓

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THE AUTONOMOUS WREATHED TETRADRACHMS OF KYME, AEOLIS

(PLATES 1-14)

JOHN H. OAKLEY

In 1972 a large hoard of over 5,000 silver coins was found in Cilicia, near modern day Kirikhan in Turkey, consisting principally of autonomous, wreath-bearing tetradrachms from a number of Asia Minor cities and dated Seleucid coinage.¹ Although dispersed rapidly, a record of a portion of this hoard was sent to the American Numismatic Society and the British Museum, including large numbers of the wreathed issues of Magnesia, Myrina, and Kyme. Since then many other specimens from these cities, most of which are probably from this hoard, have appeared on the market—enough to suggest that a die study of the output from these mints might be productive.²

¹ H. Seyrig, *Trésors du Levant anciens et nouveaux* (Paris, 1973), p. 82, 23, cited hereafter as *Trésors*; *Coin Hoards* 1 (1975), 87 A, 87 B; 2 (1976), 90.

² This paper is the result of a project started in the 1979 Graduate Seminar of the American Numismatic Society. I am greatly indebted to Nancy Waggoner for her constant encouragement and help throughout both the seminar and the preparation of this article. I would also like to thank Margaret Thompson, Otto Mørkholm and Nancy Moore for their many useful suggestions on earlier drafts of this article. Special thanks must go to the entire ANS staff and to the following persons for supplying information, casts and/or photographs of coins in their collections: P. Arnold (Dresden), H. Bloesch (Winterthur), G. Dembski (Vienna), J. Dockendorf (Cambridge, Mass.), G. Förchner (Frankfurt-Historisches Museum), P. R. Franke (Saarbrücken), D. Gerin and M^{me} H. Nicolet (Paris), A. Houghton (Santa Monica, Cal.), C. M. Kraay (Oxford), H. Kùthmann (Munich), J. Lallemand (Brussels), P.-H. Martin (Karlsruhe), J. H. Nordbø (Oslo), M^{me} Oeconomides (Athens), M.

Although many cities during the second century B.C. employed a wreath design as a framing element on the reverse type of their coins, little attention has been paid to the individual mints which produced them. Only the Magnesians issues and Athenian New Style coinage have been thoroughly studied,³ to which may now be added the wreathed, autonomous tetradrachms of Kyme.

Kyme⁴ was the principal city of Aeolis and had a steady history of coinage from 350 B.C. until 133 B.C. when Asia Minor became a Roman province. Although she produced earlier issues, none was a major currency and production can be characterized only as sporadic and low.⁵ Alexanders were first coined after 250 B.C.⁶ and some time after

Price (London), H. D. Schultz (E. Berlin), J. P. A. van der Vin ('s Gravenhage), J. Weschke (Frankfurt-Deutsche Bundesbank), U. Westermark (Stockholm).

³ N. Jones, "The Autonomous Wreathed Tetradrachms of Magnesia-on-Maeander," *ANSMN* 24 (1979), pp. 63–109, cited hereafter as Jones; and M. Thompson, *The New Style Silver Coinage of Athens*, *ANSNS* 10 (New York, 1961), cited hereafter as Thompson. J. Milne, "The Silver Coinage of Smyrna," *NC* 1914, pp. 273–98 is now out of date.

⁴ For a complete corpus of the epigraphical testimony with bibliography, see H. Engelmann, *Die Inschriften von Kyme* (Bonn, 1976); see also G. Petzl and H. W. Pleket, "Ein hellenistisches Ehrendekret aus Kyme," *Chiron* 9 (1979), pp. 73ff.; for the history of Kyme, E. Akurgal, *Ancient Civilizations and Ruins of Turkey*, 4th ed. (Istanbul, 1978), p. 112; G. E. Bean, *Aegean Turkey* (New York, 1966), pp. 193–96; *Cambridge Ancient History*, vol. 2, part 2, 3rd ed. (Cambridge, 1975), p. 780; and *RE* 11, s.v. "Kyme," cols. 2475–78 (Weiss); R. Hosek, in *Anatolian Collection of Charles University; Kyme 1*, ed. by J. Bouzek (Prague, 1974), pp. 179–206. For the topography and archaeology of Kyme, see Bouzek 1974; J. Bouzek, P. Kostomitsopoulos, and I. Ondřejová, *The Results of the Czechoslovak Expedition, Kyme 2* (Prague, 1980); P. Knoblauch, "Topographische Aufnahme von Kyme," *AA* 89 (1974), pp. 285ff.; for a map and review of previous excavations see J. Schäfer and H. Schläger, "Zur Seeseite von Kyme in der Aeolis," *AA* 77 (1962), cols. 47ff.

⁵ These include a series of silver pieces dated in *BMCTroas* (p. 105, 10–13) to 480–450 B.C. and some earlier electrum and silver issues which have at times been attributed to Kyme (see *BMCTroas*, pp. 104–5, 1–9, pl. 19, 4–7, and pp. xlix–l; C. Kraay and M. Hirmer, *Greek Coins* [London, 1966], p. 367, 687). For the best history of Kymaean coinage see *BMCTroas*, pp. xlviii ff.; for the bronze coinage, J. G. Milne, "The Mint of Kyme in the Third Century B.C.," *NC* 1940, pp. 129–37; for other articles see F. Kiechle, "Mysien-Troas-Aiolis-Lesbos," *Jahrbuch für Numismatik und Geldgeschichte* 10 (1959/60), pp. 148–50.

⁶ C. Boehringer, *Zur Chronologie mittelhellenistischer Münzserien 220–160 v. Chr.* (Berlin, 1972), pp. 129 and 192, hereafter cited as Boehringer.

these, the wreathed, autonomous, silver tetradrachms, the subject of this study, were minted.

These wreathed tetradrachms were struck on thin, spread flans (the fabric commonly used in the second century B.C.), to a reduced Attic standard, and the dies show a constant twelve o'clock axis.⁷ The female head in profile to the right which decorates the obverse is generally thought to be Kyme the Amazon. This is the most plausible identification because the figure lacks the attributes and jewelry with which goddesses are usually depicted on the coins of other cities; she wears only a simple hairband, and exhibits hard facial features. Similar heads appeared earlier on both the silver and bronze coinage of Kyme,⁸ while on a later Kymaeian Imperial coin, a figure wearing a short chiton and lunate headdress, who stands to the left with a globe in her right hand and a trident in her left, is inscribed KYMH AIOΛIS.⁹ Patronymic Amazons appear on the coinage of many other cities of Asia Minor in Roman times, but Kyme is the only city to use one in the hellenistic period.¹⁰

On the reverse, surrounded by a wreath, is a horse that moves to the right, his foot arched high in the air. Beneath the groundline on which he stands is written the name of a magistrate.¹¹ A Kymaeian

⁷ Noted by M. Thompson, *The Agrinion Hoard*, ANSNNM 159 (New York, 1968), p. 3. A single wreathed drachm has recently appeared on the market (*NFA* 8, 6 June 1980, 222).

⁸ *BMCTroas*, p. 109, 58, pl. 20, 16 (silver); p. 109, 56, pl. 20, 14 (bronze).

⁹ *BMCTroas*, p. 118, 128, pl. 23, 9.

¹⁰ F. Imhoof-Blumer, "Die Amazonen auf griechischen Münzen," *Nomisma* 2 (1908), pp. 1-18; female heads on some of the hellenistic bronze coins of Mesembria on the North Sea have been identified as Amazons, using the Kyme coins as a parallel, see T. Gerasimov, "Représentation d'une Amazone sur des Monnaies de Messembria sur la Mer Noire," *Bulletin de l'Institut d'Archéologie* (Sofia) 30 (1967), pp. 192-93.

¹¹ Inscriptions from Kyme give no indication of the function of the magistrates whose names adorn the reverse of these coins, although magistrates' names are a common occurrence on earlier Kymaeian coins; see Milne (above, n. 5). A Metrophanes and Olympios appear in an inscription dated ca. 130 B.C. (Engelmann [above, n. 4], pp. 27ff.), while a few of the other names appear in less well-dated inscriptions. As no patronymic is given on the coins it is impossible to determine whether the persons are the same. Another possibility is the hypothesis advanced by Jones, pp. 82-90 and n. 23, that the names which adorn the coinages of many cities result

cup with one handle, characterized by a body which narrows quickly from a wide rim to a small foot, is found either beneath the horse or in front of him. Further to the right, running vertically, is the ethnic KYMAION. Only on the issue of the magistrate Herakleides is there an additional feature—an eagle over thunderbolt to the right of the horse. Both horse and vase are characteristically found on the earlier coinage of Kyme, as is also the eagle.¹²

DIE STUDY

A die study of 540 coins has revealed twelve magistrates' names and 79 obverse dies. Unfortunately die links occur only between two separate pairs of magistrates, so that the internal sequence of the series cannot be secured by linkage. It is necessary, therefore, to rely on criteria of style which, admittedly, are not conclusive. An overall ratio of 6.8 coins per obverse die (see Table 1, below) suggests that there are probably no missing obverse dies.¹³ This figure is misleading, however, as 16 dies are represented by only one coin and ten by two. In addition, seven of the issues fall below the six to eight coins per die ratio suggested by statisticians as necessary to insure a complete or nearly complete record. One magistrate, Alexandros, is known from only one coin, suggesting that an entire magistrate's issue might be missing, although it is unlikely. Thus the record is probably complete in regard to obverse dies only for half of the issues.

On the positive side, the lack of linkage and limited number of magistrates strongly indicate that each magistrate was solely responsible for the issue bearing his name during a single continuous time period, so that the possibility of magistrates working contemporaneously or

from a "money liturgy." As we lack evidence for this at Kyme, the names are here taken to indicate mint magistrates.

¹² Horse and eagle, *BMCTroas*, p. 106, 14 (pl. 19, 10); cup, *BMCTroas*, p. 106, 16 (pl. 19, 12).

¹³ See especially E. J. P. Raven, "Problems of the Earliest Owls of Athens," *Essays Robinson*, pp. 40ff., and W. McGovern, "Missing Die Probabilities, Expected Die Production and the Index Figure," *ANSMN* 25 (1980), pp. 209ff.; see also Thompson, p. 711, and G. Th. Guilbaud, "A propos de l'estimation du nombre des coins," *Bulletin de la Société Française de Numismatique* 29 (July 1974), pp. 625-34.

during more than one period is slim. Supporting this is the stylistic unity of each magistrate's coins.

The material breaks down into two groups. The larger contains the issues of the nine magistrates Metrophanes, Kallias, Straton, Olympios, Euktemon, Seuthes, Demetrios, Herakleides and Philodoxos, with a die link between those of Metrophanes and Kallias. On the die linked coins of Metrophanes (Plate 2, 12.a) slight die breakage can occasionally be observed between the bun of hair and the shoulder of the Amazon. On all the specimens of Kallias (Plate 3, 12.b) the breakage is greater, the line extending into the shoulder of Kyme; hence Kallias follows Metrophanes. The stylistic sequence which evolves from this pair suggests that the coins of the other seven magistrates follow those of Kallias, thus placing Metrophanes as the earliest of the group. By using internal reverse die linkage in each magistrate's issue where it exists, and noting the changing hair styles, it has been possible to arrange the other seven issues in chronological order, both in relation to each other, as well as with regard to the internal sequence of each magistrate's issue.

TABLE 1: Suggested Chronological Order

	<i>Obverse Dies</i>	<i>Coins</i>	<i>Coins per Obverse Die</i>
<i>Metrophanes</i>	12	153	12.8
<i>Kallias</i>	26	169	6.5
<i>Straton</i>	11	51	4.6
<i>Olympios</i>	6	48	8.0
<i>Euktemon</i>	3	28	9.3
<i>Seuthes</i>	5	33	6.7
<i>Demetrios</i>	1	5	5.0
<i>Herakleides</i>	2	9	4.5
<i>Philodoxos</i>	7	10	1.4
<i>Alexandros</i>	1	1	1.0
<i>Diogenes</i>	2	11	5.5
<i>Amphiktyon</i>	5	21	4.2
<i>Totals</i>	81		
	-2 die links		
	79	540	6.8

In support of this sequence, compare the last few obverse dies of one magistrate's issue with the earliest of those following him. For example, compare Kallias 25 and 26 (Plate 7, 36.a and 37.b) with Straton 1 and 2 (Plate 7, 38.b and 39.b) respectively; or Straton 11 (Plate 9, 48.a) with Olympios 1 (Plate 9, 49.d). The dies are so close stylistically that it is probable that only a single example is missing from one magistrate's issue or the other's to secure the sequence by die linkage.

The most important stylistic feature for arranging these issues, as noted above, is the changing hair style of the Amazon on the obverse. On the earliest obverses of Metrophanes (Plate 1, 1.s) the locks of hair above the hairband are stacked in horizontal rows with the individual strands within the locks indicated. The bun in back is composed of a series of bumpy nodules. As this magistrate's issue continues, the locks above the hairband are no longer stacked, but flow downward into one another, giving a shaggy appearance to the hair (Plate 2, 10.e). The early obverses of Kallias are similar (Plate 3, 13.b), but change quickly to a system of locks (Plate 3, 16.a), the upper layer of which curls backward, covering the front part of the head, while the lower curls up and back on the lower back of the head. This type gives way to a series of dies where individual strands of hair replace the locks (Plate 5, 27.a). They flow from the top of the head downward. Finally the last few obverses return again to a system of locks (Plate 7, 36.a). This time they are arranged in two layers, the ends of the topmost of which curl up and out in an affected manner. The earliest issues of Straton (Plate 7, 39.b) continue in this manner, although the system of locks gives way gradually to individual strands again, which are arranged in a similar manner as the preceding (Plate 8, 45.b). The last obverse die of Straton (Plate 9, 48.a) and those of Olympios show a distinct change of style. The hair now consists of a series of large striated strands, at first arranged irregularly (Plate 9, 49.d), but later in parallel, elongated, s-curves (Plate 10, 53.b). In addition, the breadth of the stacked layers of hair beneath the hairband in the area over the ear now increases in size noticeably, moving outward and curling slightly up, while the bun in back is composed of a series of knotted strands. The issues of Euktemon (Plate 10, 55.k) and Seuthes (Plate 11, 59.a) show the same characteristics, although there is a general trend for the

hair on top to be delineated by thinner, often unstriated, individual strands. On the last obverse die of Seuthes (Plate 11, 62.a), the singleton of Demetrios (Plate 11, 63.d) and the two of Herakleides (Plate 12, 64.a and 65.e), the delineation of these individual strands moves from finely incised lines to roughly etched ones. At the same time the bun in back now becomes stylized, continuing the pattern of the stacked layers beneath the hairband, while curling up and back.

Only the coins of Philodoxos present a problem. Four of his dies are similar to those produced under Kallias (Plate 13, 69.a, 70.a, 71.a, and 72.a) while the other three come closer to those of Herakleides (Plate 12, 66.a, 67.a, 68.a). Since Herakleides is stylistically the latest of the first eight magistrates, it seems best to place Philodoxos after him. Two additional points regarding the issue of Philodoxos should be noted here. First, the quality of the die engraving is much poorer than any other magistrate's issue and second, the weights of his coins are consistently a half gram to nearly two lower than those of any other issue.¹⁴ Both of these factors suggest that the mint was not running too smoothly at this time, and we should perhaps not be surprised to see the die engravers looking to an earlier issue for their inspiration.

The hair style of the second group, which consists of three magistrates (Alexandros, Diogenes, Amphiktyon), is characterized by thick, undulating, horizontal waves and comes closest to the later issues of the first group; therefore the second group must follow the first. Two factors support this. First, the wreath on the reverse of their issues is thinner than that of the first group and occupies a larger area, so that only when the coin is properly struck is the entire wreath visible. This trend on Attic New Style coinage is a later development. Secondly, the Kymaeian cup is placed in front of the horse on the earliest issues of the first group but below the horse on the latest. On the issues of Olympios, a transitional series, the cup is placed both in front of and

¹⁴ Almost all the coins of the other issues weigh well over 16 grams while, with the exception of Philodoxos's 72.a, all of the coins of Philodoxos's issue fall in the 14-15 gram range.

below the horse.¹⁵ Since the cup appears beneath the horse on all the issues of the second group, they must be later than the first.¹⁶

The sequence of the magistrates is again clarified by die breakage, as a die link occurs between the issues of Amphiktyon (Plate 14, 75.a) and Diogenes (Plate 14, 75.a). On the die linked coins of Amphiktyon, greater die breakage can be noted around and below the curl which protrudes from the mass of hair above the ear; hence those of Amphiktyon follow those of Diogenes. The single Alexandros coin (Plate 13, 73.a) comes stylistically closest to those of Diogenes, making it the earliest in this series. It is likely that some time separates the second group from the first as the sudden drop in weight of the Philodoxos issue suggests.

Using the proposed sequence of issues, the history of the coinage can be examined. Interestingly over half the obverse dies appear in the first three issues and almost two-thirds in the first four (Table 1). The twenty-six obverse dies of Kallias equal those of the most productive years of the Athenian New Style coinage,¹⁷ indicating that unlike other coinages of the second century B.C., such as the Magnesians wreathed tetradrachms, cistophoric, and New Style, the Kymaean wreathed tetradrachms started immediately with a series of large issues.¹⁸ After the initial outburst of activity, the production rate fell off sharply to a few dies an issue until the end of the coinage. Two questions arise:

¹⁵ The ratio of those in front to those below is about 50–50 with the reverse associated with each obverse equalling approximately the same proportion. Only one reverse of Straton, 46.a, has the cup below the horse—logically it is one of the latest.

¹⁶ Of the later issues, only on one of the reverses of Philodoxos, 72.a, does the cup appear in front of the horse again. As noted in the text, the obverse die accompanying the reverse was probably copied from an earlier die of Kallias. Thus we can conclude that the reverse in this case was also copied, hence the momentary return to the old style.

¹⁷ It is not until the 64th year that the New Style coinage used as many dies as the Kallias issue, and only five issues equal or surpass those of Kallias: 64th year, 29 obverse dies, Thompson, pp. 300ff.; 65th year, 47 obverse dies, Thompson, pp. 320ff.; 66th year, 33 obverse dies, Thompson, pp. 329ff.; 67th year, 30 obverse dies, Thompson, pp. 335ff.; 72nd year, 42 obverse dies, Thompson, pp. 354ff.

¹⁸ Thompson, pp. 32ff.; F. S. Kleiner and S. P. Noe, *The Early Cistophoric Coinage*, ANSNS 14 (New York, 1977), pp. 22ff.; Jones, p. 67, Table 1.

TABLE 2: Weight Distribution by Magistrate

	<i>Metro- phanes</i>	<i>Kallias</i>	<i>Straton</i>	<i>Olympios</i>	<i>Eukle- mon</i>	<i>Seuthes</i>	<i>Deme- trios</i>	<i>Hera- kleides</i>	<i>Philo- doros</i>	<i>Alex- andros</i>	<i>Dio- genes</i>	<i>Amphik- tyon</i>
<i>17.00-09</i>		1										
<i>16.90-99</i>	6	3	2	2		2		1				3
<i>16.80-89</i>	10	14	3	3	2	3		1				1
<i>16.70-79</i>	20	17	4	6	4	6	3				3	5
<i>16.60-69</i>	15	17	5	6		4		1			2	6
<i>16.50-59</i>	17	12	3	6	2	4					2	1
<i>16.40-49</i>	14	15	4	4	2	1					1	
<i>16.30-39</i>	6	10	2	4	1	2					1	1
<i>16.20-29</i>	9	4	5	3	1	1	1					
<i>16.10-19</i>	5	13	6		2	3		1	1			
<i>16.00-09</i>	4	7	2	1	4							
<i>Below 16.00</i>	11	19	3	8	2	4	2	1	9		2	1
<i>Totals</i>	117	132	39	43	20	30	5	6	10	1	11	18

why is there such a large production which lasts for only a few issues, and what is the historical reason for this atypical pattern of production? To investigate these questions, the dating of the coins must be established.

CHRONOLOGY

The chronology of the wreathed tetradrachms of Kyme has received general attention, but a detailed study of the evidence has not yet been attempted. Originally the coinage was dated between the broad boundaries of the Conference of Apameia in 188 B.C. and the creation of the Roman province of Asia in 133 B.C.¹⁹ More recently, on the basis of a number of hoards, M. Thompson has dated the coinage to 165–155 B.C.²⁰ Since then, several other hoards have appeared, most notably the Kirikhan hoard, while some of the earlier ones have been more fully published, suggesting that a complete review of the evidence is in order.²¹

Kymaean wreathed tetradrachms appear in 13 hoards (Table 3). Most of the hoards contain similar autonomous issues from other cities in Asia Minor, along with Seleucid and/or other royal coinage. As the last two coinages are often dated, burial dates for these hoards are often quite accurate. The anomalous Agrinion hoard, consisting primarily of coins of the Greek mainland, has two coins of Kyme that were probably, according to Thompson, deposited there by a mercenary.²² Of the others, only the Ras-Baalbek Hoard,²³ no. 10, is of mixed weight standard—Seleucid, autonomous issues, and Phoenician-weight didrachms. Except for the Agrinion hoard, no. 6, one Asia Minor hoard, no. 7, and the Urfa hoard, no. 3, all are from Seleucid Syria—modern Syria and Lebanon.²⁴ Only coins from the issue of Alexandros

¹⁹ *HN*, pp. 554ff.; *BMCTroas*, p. 1.

²⁰ Thompson, *Agrinion* (above, n. 7), pp. 82–83.

²¹ Most important are the Syrian hoards published by Seyrig, *Trésors*.

²² *IGCH* 271; Thompson, *Agrinion* (above, n. 7), p. 83.

²³ *IGCH* 1593; *Trésors*, pp. 83–84, no. 24.

²⁴ *IGCH* 271, 1432 and 1772 respectively.

do not appear in these hoards, and the earliest issues according to the sequence proposed above are the most frequent.²⁵

Nine of the thirteen hoards have been dated to 150–140 B.C., nos. 1, 2, 4, 5, 7, 8, 9, 10, 11; a tenth to 145–135, no. 6; an eleventh to 138 B.C., no. 12. Of the remaining two, the Baarin hoard, no. 13, is dated similarly (150–140 B.C.) with the exception of a single tetradrachm of Antiochus IX of Sidon dating to 110 B.C. Seyrig has probably correctly surmised that this single coin was a later addition to an old treasure.²⁶ The last, the Urfa hoard, no. 3, has been consistently down-dated during the last few years. The date of the burial, originally placed around 190 B.C.,²⁷ was revised to 185–160 B.C.,²⁸ and then to post-160 B.C.²⁹ Composed of two hundred silver coins, mostly royal with the exception of a single Kymaeian wreathed tetradrachm and a single Athenian New Style tetradrachm, the latest dated Seleucid coin is a tetradrachm of Antiochus III (203–187 B.C.) from Seleucia ad Tigris, hence the original date. The reasons for the down-dating have been the discovery of anchor and head of Helios countermarks on some of the Alexander tetradrachms (the former countermark first occurring in the second quarter of the century)³⁰ and the consideration of the hoard evidence from the single Kymaeian piece and the two Alexanders of Temnos, the latter not appearing in hoards until 165–160 B.C.³¹ Recently the integrity of the hoard has been questioned by Price who has suggested that late Seleucid coins might have been removed from it.³²

²⁵ The number of hoards in which each issue occurs is: Metrophanes, 6; Kallias, 8; Straton, 6; Olympios, 7; Euktemon, 4; Scuthes, 3; Demetrios, 2; Diogenes, 1; Amphictyon, 3. Coins of Philodoxos, Heracleides, and Diogenes have appeared on the market since 1972 and were probably part of the Kirikhan hoard, no. 11. Thus the Kirikhan hoard appears to have examples of the issues of all the magistrates except for Alexandros. However, since the above issues were not reported with the hoard, I have not included them in Table 3.

²⁶ *IGCH* 1567; *Trésors*, pp. 93–94, no. 28.

²⁷ *IGCH* 1772; G. K. Jenkins, "Hoard from Mesopotamia," *ANSMN* 13 (1967), pp. 55–56.

²⁸ M. Price, "Greek Coin Hoards in the British Museum," *NC* 1969, pp. 10–14.

²⁹ *Trésors*, p. 61, n. 1.

³⁰ Price (above, n. 28), p. 14.

³¹ *Trésors*, p. 61.

³² Price (above, n. 28), p. 14 and n. 13, which makes one wonder if the pieces from Kyme and Temnos might be intrusions.

TABLE 3
Hoards with Kymaeon Wreathed Tetradrachms

No.	Find Spot	IGCH or Coin Hoards Reference	Date of Burial	Latest Datable Element	Total No. of Coins	No. of Kymaeon Tetradrachms	No. per Magistrate
1	Akkar	IGCH 1559	150-145	tetradr. of Alexander I Bala (150-145)	69	5	3, Kallias 1, Straton 1, Olympos
2	Ghonsle	IGCH 1560	150-145	tetradr. of Alexander I Bala (150-145)	32	4	1, Metrophanes 1, Kallias 1, Olympos 1, Seuthes 1, Demetrios
3	Urfa	IGCH 1772	post-160	Alexander tetradr. of Temnos	200	1	1, Demetrios
4	Osmaniye	IGCH 1433	145	tetradr. of Alexander I Bala (150-145)	300	10	10, ?
5	North Syria	IGCH 1556	145-140	tetradr. of Demetrios II (146-140 first reign)	38	14	4, Metrophanes 1, Kallias 5, Straton 2, Olympos 2, ?
6	Agrinion	IGCH 271	145-135	Roman denarii	1348	2	1, Metrophanes 1, ?
7	Asia Minor	IGCH 1432	150-140	Athenian New Style tetradr., 155/4 on lower chronology	22	2	1, Amphiktyon 1, Diogenes

<i>No.</i>	<i>Find Spot</i>	<i>IGCH or Coin Hoards Reference</i>	<i>Date of Burial</i>	<i>Latest Datable Element</i>	<i>Total No. of coins</i>	<i>No. of Kymaean Tetradrachms</i>	<i>No. per Magistrate</i>
8	El Aweiniye	IGCH 1550	150-140		79	43	1, Metrophanes 4, Kallias 30, Straton 3, Euktemon 2, Seuthes 1, Amphiktyon 2, ?
9	Teffaha	IGCH 1557	140	tetradr. of Demetrios II (146-140, first reign)	27	5	4, Kallias 1, Straton
10	Ras-Baablek	IGCH 1593	140	tetradr. of Demetrios II from Sidon dated 143/2	43	3	2, Olympios 1, Euktemon
11	Cilicia, near Kirikhan	CH 1, p. 26, no. 87A, 87B; CH 2, p. 29, no. 90	140	tetradr. of Antiochos VI dating to 143/2	5,000+	261+	58, Metrophanes 46, Kallias 8, Straton 26, Olympios 6, Euktemon 2, Seuthes 1, Demetrios 6, Amphiktyon
12	Aleppo	IGCH 1562	138	countermarks of Tryphon (142/1-139/8) on tetradr. of Lebedus and Heracleia Ioniae	35	4	1, Kallias 1, Straton 1, Olympios 1, Euktemon
13	Baarin	IGCH 1567	110 or 150	tetradr. of Antiochos IX dated to 110 B.C.; probably a much later insertion	21	5	1, Metrophanes 3, Kallias 1, Olympios

The hoard evidence, then, indicates overwhelmingly that the decade 150–140 B.C. was the period of greatest circulation for the Kymaeian wreathed tetradrachms. That most were produced shortly before they were buried is attested by the almost uniformly pristine condition of those found in hoards. Most noteworthy among these are those from the Kirikhan hoard, no. 11, whose latest Seleucid coin dates to 143/2 B.C. Allowing time for limited circulation and transfer to Syria, and taking into consideration the evidence supplied by the Urfa hoard (no. 3, post-160 B.C., but by no means a reliable source), and the Asia Minor hoard, no. 7, whose latest datable element is an Athenian New Style tetradrachm dating to 155/4 on the lower chronology, a beginning date of ca. 165–160 B.C. seems in order while the latest date must be before 140 B.C. Supporting the beginning date is the absence of Kymaeian wreathed tetradrachms in the Latakia hoard of 1759 buried in 169 B.C.³³

Although our knowledge of Kymaeian history in the hellenistic age is meager,³⁴ we do know that in 192 B.C., when war broke out between Antiochus III and Rome in alliance with Pergamon and Rhodes, Kyme was compelled to surrender to Antiochus and work for him. After the Roman victory at Magnesia-near-Siphus, Kyme was one of the cities given its freedom by the Romans after the Conference of Apameia in 188 B.C. Between then and 133 B.C., when the Romans took over the province of Asia, the city maintained its freedom. Unfortunately no known impetus appears in the historical record for the beginning of its coinage in 165–160 B.C.

In 156 B.C. Prusias II of Bithynia invaded the kingdom of his neighbor Attalos II and advanced to Pergamon, destroying the unprotected sanctuaries there and later ravaging the coast.³⁵ Attalos, not daring to attack an ally of Rome without her consent, sent envoys to Rome

³³ *IGCH* 1544; *Trésors*, pp. 49ff., no. 11.

³⁴ For the best general survey of the events in Asia Minor at this time see *RRAM*, pp. 103ff.

³⁵ For a narrative of this campaign, see L. Robert, *Études Anatoliennes* (Paris, 1937), pp. 111–18; *RRAM*, pp. 116–17; E. V. Hansen, *The Attalids of Pergamon* (Ithaca, 1947), pp. 125–28. See E. Will, *Histoire politique du monde hellénistique* (Nancy, 1967), p. 322, for further bibliography.

requesting help. It was not until 155/4 B.C. that the Romans, the decisions of their commissioners for an equitable settlement having been rebuked by Prusias, finally broke their ties with Bithynia, allowing Attalos to defend his territory; at the same time the Romans encouraged their allies to support Attalos. After the defeat of Prusias in 154 B.C., part of the peace agreement imposed by the Romans was that Kyme, along with Aigai, Methymna, and Heracleia, would receive an indemnity of 100 talents from Prusias because their land had been ravaged during Prusias's invasion.³⁶

It is tempting to see this indemnity payment as the reason for the beginning of the Kymaeon wreathed tetradrachms, as the high initial production rate noted earlier could be explained by the sudden availability of these funds. A city in the process of recovery from an invasion with a sudden source of silver—the most likely form of payment—would coin it quickly to aid its recovery and trade. However, two of the hoards speak against such a late starting date. The first, the Urfa hoard, no. 3, recently has been down-dated to post 160 B.C., although that date is in question. The second, the Asia Minor Hoard, no. 7, whose latest datable coin is an Athenian New Style tetradrachm dating to 155/4 on the lower chronology, would have to be down-dated more than ten years because of the late Kymaeon issues of Amphiktyon and Diogenes in the hoard in order to agree with a beginning date of 154 B.C. Thus, unless further evidence concerning the dates of these two hoards comes to light, we must adhere to a starting date of 165–160 B.C. for the Kymaeon wreathed tetradrachms, no matter how attractive it is to see the indemnity payment of Prusias as the starting date for the coinage.³⁷

³⁶ Polybius 33.13.8.

³⁷ It is also tempting to equate the break between the first and second groups with this event. Especially since the Philodoxos issue, the last issue of the first group, is characterized by low weights and the poor quality of its dies. However, then we would expect to see the indemnity payment of Prusias reflected in the early issues of the second group. The one and two obverse dies for Alexandros and Diogenes respectively, the first two issues of the second group, seem to negate this possibility.

CONCLUSION

In conclusion, although there is no clear historical reason for the beginning of the wreathed issues of Kyme, this study sheds some light on some of the latest theories concerning the minting of wreath-bearing Attic weight tetradrachms by other Greek cities. In all, some 20 Greek cities issued coins with a wreath as the framing device on the reverse type in the second century B.C., in addition to the first two Macedonian districts, Eumenes II of Pergamon, and the Phoenician port of Aradus.³⁸ The earliest was probably Athens, although the starting date for her wreath-bearing or New Style coinage is disputed, Thompson preferring 196 B.C. and Lewis arguing for 164 B.C.³⁹

In 1972, Boehringer suggested that all of these emissions were due to the opening of the free port of Delos in 166 B.C.; that the new coinage was produced to facilitate the increased volume of trade. The epigraphical term "stephanephoros," which appears in contemporary Delian accounts and which was earlier shown by Robert to refer to Athenian New Style coinage, was extended by Boehringer to include all the wreathed issues. On the basis of this extension, he postulated an Aegean Münzunion, membership being indicated by a wreath on the reverse of a city's coins.⁴⁰

Recently Giovannini rejected Boehringer's theory on the grounds that a new type of money for an economic union of any sort would establish a new weight standard. Stressing that the quick replacement of Alexanders by wreathed issues was an unprecedented act in the

³⁸ For a list of these cities, see L. Robert, "L'argent d'Athènes stephanéphore," *RN* 1977, p. 35; Boehringer, p. 14, and Beilage 5 for a map showing the location of these cities; and O. Morkholm, "Chronology and Meaning of the Wreath Coinages of the early 2nd. Cent. B.C.," *NumAntClas* 9 (1980), p. 145, n. 5, and p. 146.

³⁹ The basic arguments for the higher chronology are outlined in M. Thompson, "Athens Again," *NC* 1962, pp. 300ff.; those for the lower chronology in D. M. Lewis, "The Chronology of the Athenian New Style Coinage," *NC* 1962, pp. 275-300; for later arguments and bibliography, see A. Giovannini, *Rome et la circulation monétaire en Grèce au II^e siècle avant Jesus Christ* (Basel, 1978), pp. 4-6 and n. 13 (hereafter cited as Giovannini).

⁴⁰ Boehringer, pp. 14-19 (wreathed issues), 31-38 (stephanephoros) and 38-39 (Münzunion).

history of coinage, he suggested that a political motive was responsible for their initiation. Tying the coinages to Aemilius Paullus's defeat of Perseus at Pydna in 168 B.C. and the abolition of the Macedonian monarchy, he suggested that the wreath design referred to the wreaths of victory given to Aemilius Paullus in 168 B.C. at the Panhellenic conference in Amphipolis, after the battle of Pydna. Both this wreath design and the new obverse types, which no longer used the king's head, were types which reflected the Roman desire to abolish all signs of the Macedonian monarchy. This *reform du stephanephore* he felt was enacted exclusively for political motives at the express demand of the Romans, probably via the Amphictyonic League.⁴¹

Jones⁴² and Robert,⁴³ both writing before Giovannini's work was circulated, have also presented evidence against Boehringer's theory which is equally damning for Giovannini's. Both rightfully stress the fact that all the issues of this period, not merely the wreathed examples, should be taken into account, something both Giovannini and Boehringer fail to do. Unexplained by Giovannini's and Boehringer's theories is the fact that some cities, as for example Kos and Lampsakos, do not have wreathed issues, while their neighbors, Herakleia and Abydos, do. In addition, the coins of other cities, which are similar in fabric and style except for the wreath on the reverse, remain unaccounted for.⁴⁴ Robert, moreover, rightly stresses that there is still no reason to interpret the term "stephanephoros" as referring to all the wreathed issues. He considers the wreath pure decoration with no political or economic significance. Most importantly, however, Jones has suggested that the Magnesians did not begin to coin wreathed tetradrachms until 155 B.C., a date which nullifies the all-encompassing dates of both Boehringer and Giovannini.

⁴¹ Giovannini, pp. 17ff. (disappearance of the Alexanders), 75ff. (rejection of Boehringer's theory), and 94ff. (*reform du stephanephore*).

⁴² Jones (above, n. 3), pp. 63-109.

⁴³ Robert (above, n. 38), pp. 34ff.

⁴⁴ For example, see the autonomous issue of Alexandria Troas, *BMCTroas*, p. 11, no. 23 (pl. 4, 1); see also, N. Waggoner, "Coins from the William P. Wallace Collection," *ANSMN* 25 (1980), pp. 12-14.

Supporting this conclusion, Mørkholm⁴⁵ recently has shown conclusively that the wreathed tetrachms of Eumenes II,⁴⁶ a wreathed tetrachm from Seleucia Pieria of Antiochus IV, and a wreathed Alexander tetrachm of Erythrae must date before 170 B.C. The wreathed Alexander tetrachm of Erythrae is die linked to an unwreathed Alexander tetrachm of Erythrae from the Latakiye hoard of 1759 which dates to 169/8 B.C. Thus both issues must date before 170 B.C. Mørkholm further reviewed the epigraphical and numismatic evidence regarding the wreathed issues and concluded, as Robert did, that the wreath design had no political or economic significance; rather it was only the latest style in coin design. He then traced the spread of this design from the north to Athens, and then to Asia Minor.

On the other hand, Jones did not deny the economic significance of the "re-direction or intensification of commerce due to the opening of the free port of Delos," but suggested that the reason for the inception of all the Asian autonomous issues was as a reaction to the cistophoric currencies. The fact that cistophoroi are found in hoards, characterized by a lack of foreign currency, only within the boundaries of the Attalid kingdom, indicates an overvaluation of the coinage. He suggested that this overvaluation would force traders to pay the difference between their currency and the cistophoric before completing a transaction. This would in turn cause the free states to look elsewhere for new markets, hence the need for an increased production of coinage. Since each city would face this problem at a different time, a uniform date for the beginning of all the coinage is unlikely. He rightfully acknowledged that some of the autonomous issues might have begun prior to 166 B.C., the date suggested by Kleiner and Noe for the inception of the cistophoric currency, but suggested that an earlier date is not precluded by any of their discussion; hence his hypothesis would still be valid. He paralleled the change in type from civic Alexanders to autonomous issues with the change from regnal types to the cista

⁴⁵ Mørkholm (above, n. 38).

⁴⁶ In another article in this issue of *ANSMN* R. Bauslaugh demonstrates why the wreathed tetrachm of Eumenes II should be dated to 172 B.C. I thank him for sharing an earlier version of this article with me.

mystica and bow-case of the cistophoroi in Attalid territory and considered the former an attempt to stress autonomy.⁴⁷

Although limiting himself to only the Asian autonomous issues, Jones's major fault lies in that he still attempts to explain a group of individual issues by one historical or economic factor. As there are loopholes in Boehringer's and Giovannini's all-encompassing theories, so are there also in his. For example, Jones fails to recognize that many of the Asian autonomous issues were not large emissions like those of Magnesia and Kyme. Rather, many appear to be small, such as those of Kolophon, Lebedus, and Myndos.⁴⁸ Thus, we certainly cannot view them as examples of an increased production of coinage by free states looking for new markets. Another problem is that the markets for some of these autonomous-issue striking cities, as indicated by the hoard evidence, do not change. The Alexanders of Kyme are mostly found in Seleucid Syria, just as are their successors, the wreathed issues.⁴⁹ Meanwhile, the autonomous tetradrachms of Abydos are found mainly on the Balkan peninsula, the same area where many of the Alexanders are found.⁵⁰ Others, such as the autonomous issues of Myndos, Kolophon, and Antioch, do not appear in hoards at all. These, autonomous issues may have been minted mainly for local circulation not for new markets. Thus the varying sizes of these emissions, the fact that many were first minted at different times, and the different markets for various groups of these issues, rule out any single all-encompassing theory.

Jones also noted that it had been previously suggested that the issues of Aigai, Kyme, Myrina, Herakleia, Lebedos, Smyrna, and Magnesia

⁴⁷ Jones, pp. 97ff.

⁴⁸ The ANS photo file shows Kolophon, 0; Lebedos, 12; Myndos, 0; while the ANS collection has Kolophon, 1; Lebedos, 1; Myndos, 0. See, also A. Bellinger, "The First Civic Tetradrachms of Ilium," *ANSMN* 8 (1958), p. 19, that the autonomous issue of Ilium was small; p. 23, that the issue at Kolophon was very small; for Kolophon see also J. G. Milne, *Kolophon and Its Coinage*, *ANSNM* 96 (1941), pp. 80 and 96. He lists only two known examples.

⁴⁹ Kymaean Alexanders appear in the following hoards in Seleucid Syria: Tartus, *IGCH* 1530; Syria, *IGCH* 1535; Latakia, *IGCH* 1544; Khan Cheikhoun, *IGCH* 1547; Kirikhan (above, n. 1). In Mesopotamia: Tell Lotchek, *IGCH* 1773; Babylon, *IGCH* 1774.

⁵⁰ Robert (above, n. 38), pp. 40-41, and Mørkholm (above, n. 38), p. 153 and n. 36.

started around the same time. This, combined with the fact that they were found mainly in hoards in Seleucid Syria, had suggested that a common factor was responsible for them all. But, as Jones has already noted, none of the theories so far proposed are completely satisfactory.⁵¹ Our study of the Kymean material indicates that the Kymean issues appear to start five to ten years before the Magnesians, thereby ruling out any common factor for the initiation of both coinages.⁵² Thus in regard to the wreath design, the Kymean and Magnesian material in my opinion give further support to Robert's and Mørholm's view that we should view it not as a sign of any monetary union or reform, but as the latest fad in coin design. This design was adopted by some cities at different times for different reasons, while other cities chose not to use it at all, or to adopt a similar format and style of coinage but without the wreath.

CATALOGUE

The catalogue is arranged chronologically according to the stylistic order in the text for the magistrates and the obverse dies associated with each magistrate. The reverse dies associated with each obverse are arbitrarily arranged except where a reverse link ties two obverses together. Asterisks mark the specimens illustrated in the plates.

⁵¹ So Jones, pp. 34ff; see also M. Rostovtzeff, "Some Remarks on the Monetary and Commercial Policy of the Seleucids and Attalids," *Anatolian Studies Presented to W. H. Buckler* (Manchester, 1939), pp. 277ff.; M. Rostovtzeff, *The Social and Economic History of the Hellenistic World* (Oxford, 1911), vol. 2, pp. 651-60 and 1293; Bellinger (above, n. 48), pp. 19-24; L. Robert, *Hellenica* 7 (1919), p. 86 and n. 2; H. Seyrig, "Monnaies Hellénistiques," *RN* 1963, pp. 26-28; Boehringer, pp. 49ff. and n. 15 for further bibliography.

⁵² I would like to point out that some of the obverse dies of the Magnesian and Kymean wreathed tetradrachms appear to be the work of the same die engraver. Compare obverse 8 of the Magnesian Pausanias Euphemou issue with obverse 10 of Kallias (Plate 4, 10.j). Both are obviously the work of the same die engraver. Similarly the "fine-style" dies of the Magnesian Euphemou Pausaniou issue (Jones's second issue) which are die linked to the Pausanias Euphemou issue, are stylistically similar to the third Kymean issue of Straton. Compare the Magnesian obverse 18 of Euphemou Pausaniou with our 43 (Plate 8, 43.a). Unfortunately this is of no help in determining the relative dating of the two, since the same die engraver could well have worked five to ten years later at Magnesia than at Kyme.

METROPHANES

1.
 - a. Bowers and Ruddy, 12-13 Dec. 1975 (Kensington), 2031, 16.82
 - b. Kirikhan hd.; Kirikhan hd., 16.72; Kirikhan hd., 16.92; Rauch 20, 7-8 June 1977, 42; Hirsch 85, 6-9 Nov. 1973, 4092, 16.25
 - c. Schulman, 10-13 Oct. 1972, 184; Myers 5, 15-16 Mar. 1973, 193
 - d. Demirjian 5, 1976, 5; Harmer-Rooke, 19 Jan. 1978, 160, 16.00
 - e. Hirsch 19, 11 Nov. 1907, 518, 16.45
 - f. Platt, 27 Mar. 1922 (Luneau), 623; Paris, de Luynes 2525, 16.535, ↑
 - g. Hirsch 89, 8-9 Oct. 1974, 681, 16.62
 - h. Kress 158, 8-9 Nov. 1973, 407; Ratto, 4 Apr. 1927, 1864, 16.42
 - i. Superior Stamp and Coin, 17-23 June 1974, 241
 - j. Paris (Armand-Valton 422), 16.14, ↑
 - k. ANS (Agrinion hd.), 16.14, ↑
 - l. Vecchi FPL 5, 1972, 32
 - m. Kirikhan hd.; Deutsche Bundesbank 588/60, 15.84, ↑ = Jameson 1, 1460; Cahn 66, 6 May 1930, 299, 16.63; Bourgey, 17-18 June 1974, 18, 16.52; Gans FPL 29, Winter 1962/3, 7208 = Gans 16, 19 Apr. 1960, 359, 16.38
 - n. Kirikhan hd., 16.73
 - o. Kirikhan hd., 16.682, ↑; Kirikhan hd., 16.27; Peus 283, 14-16 May 1974, 122, 16.41
 - p. Kirikhan hd., 16.842, ↑; Berlin, Löbbecke, 16.07; Kirikhan hd., 16.90
 - q. Kirikhan hd., 16.88; Kirikhan hd., 16.45
 - r. Kirikhan hd., 16.78
 - s. *Kirikhan hd.
 - t. *SNGCop* 104, 16.00, ↑
 - u. Hirsch 85, 6-9 Nov. 1973, 4093, 16.59

2.
 - a. Schulman, FPL 215, Spring 1979, 163, 16.61; Hirsch 85, 6-9 Nov. 1973, 4091, 16.6
 - b. Kirikhan hd., 16.57
 - c. Kirikhan hd.
 - d. Kirikhan hd., 16.61
 - e. McSorley FPL (no date), 122
 - f. Kirikhan hd., 16.69; Auctiones S.A. 5, 2-3 Dec. 1975, 120, 16.71
 - g. Athens 1897/8, 19.4, 16.44, ↑
 - h. Oxford, 16.68, ↑ = Naville 1, 4 Apr. 1921 (Pozzi), 2300, 16.66; Glendining, 7-8 Mar. 1957, 262, 16.15
 - i. Kirikhan hd., 16.80; Harmer-Rooke, 19 June 1973, 184A, 16.458
 - j. Brussels, de Hirsch 1474, 16.08, ↑
 - k. Kirikhan hd., 16.60
 - l. Kirikhan hd., 16.83
 - m. Kastner 12, 30 Nov. 1976, 83, 16.80
 - n. Malloy 6, 12 Mar. 1976, 110; Hirsch 105, 30 June - 5 July 1977, 3665, 16.63
 - o. Kirikhan hd., 16.84; Lepczyk, 22-24 Sept. 1978, 54
 - p. MM FPL 377, April 1976, 8, 16.74
 - q. *Kirikhan hd., 16.55
3.
 - a. Hirsch 84, 27-30 June 1973, 102, 16.21 = Kirikhan hd. 16.272, ♯; Kress 158, 8-9 Nov. 1973, 408
 - b. Kirikhan hd.; Hirsch 89, 8-9 Oct. 1974, 680, 16.47
 - c. Kirikhan hd., 16.91
 - d. *Kirikhan hd.; Hirsch 84, 27-30 June 1973, 100, 16.68 = Kirikhan hd. 16.720, ♯; Kirikhan hd.; Kirikhan hd., 16.58
- 4
 - a. Galerie des Monnaies, 9 June 1978, 1396
 - b. *Kirikhan hd., 16.68; Kirikhan hd., 16.58
 - c. Kirikhan hd., 16.50; Kirikhan hd., 16.60
 - d. Kirikhan hd.; Kirikhan hd.; Klenau 83, 27 Oct. 1973, 2235, 16.72; Kirikhan hd.; Stack's, 6-7 Sept. 1973, 431, 16.2
 - e. Kirikhan hd.; Kastner 6, 26-27 Nov. 1974, 103, 16.77; Auctiones S.A. 4, 26-27 Nov. 1974, 138, 16.74; Schwei-

- zerischer Bankverein, Winter 1975, 166, 16.50; Ciani & Vinchon, 6–8 Feb. 1956, 523, 15.99
5.
 - a. Bourgey, 14–16 June 1978, 85, 16.87; Auctiones S.A. 8, 27–28 June 1978, 238, 16.55
 - b. *Kirikhan hd., 16.74
 - c. Kirikhan hd., 16.91
 6.
 - a. Kirikhan hd., 16.72 = Kölner Münz 24, 16–17 Oct. 1978, 109, 16.60; Vienna 16.772, 16.28, ↑; Kirikhan hd., 16.78
 - b. Kirikhan hd., 16.362, ↑ = Bayerische Vereinsbank 6, Apr. 1974, 75, 16.33; Coin Galleries, 19 Nov. 1973, 232, 15.81
 - c. Kirikhan hd. 16.818, ↑; Kirikhan hd., 16.91
 - d. *ANS (Berry), 16.33, ↑
 - e. Ciani, 18 Dec. 1924 (Barrachin), 237, 16.2
 - f. Coin Galleries FPL, 1962–4, D 61, 15.5 = Coin Galleries FPL, 1963–5/6, F 73
 - g. Glendining, 21–23 Feb. 1961 (Lockett), 2220, 16.24 = Naville 1, 4 Apr. 1921 (Pozzi), 2298, 16.24
 - h. Kirikhan hd. 16.724, ↑; Berlin (Löbbecke), 16.53, ↑; Brussels, de Hirsch 1475, 16.14, ↑
 7.
 - a. Naville 12, 18–23 Oct. 1926 (Bissen et al.), 1749, 16.57 = Hess, 18–19 March 1918, 671, 16.6 = Hirsch 21, 16 Nov. 1908 (Weber), 2637, 16.60
 - b. Dupriez 90, 12 Dec. 1906, 5; *McLean* 7900, 16.18, ↑
 - c. *Rosenberg 72, 11 July 1932, 587, 16.50
 - d. Kölner Münz 8, 28–29 Sept. 1971, 11, 16.46
 - e. Vienna 28.844, 15.87, ↑
 - f. Paris (Delpierre 2557), 16.41, †; *BMCTroas*, p. 111, 74, 16.64; MM FPL 242, Apr. 1964, 11, 15.46
 8.
 - a. *ANS (Dewing) 16.55, ↑ = Helbing, 31 Jan. 1930, 309, 16.7 = Schulman, 21 Oct. 1912, 71, 16.5; Kress 173, 2–3 Nov. 1978, 468; Kirikhan hd., 16.87
 - b. Kirikhan hd., 16.72; MM FPL 358, July 1974, 15, 16.86
 - c. Kirikhan hd., 16.78
 - d. Coin Galleries, 21 Apr. 1976, 902, 16.78
 - e. Warren, 1060, 16.37

- f. Harmer-Rooke, 28–29 May 1974, 1242, 16.426
- g. Schulman 248, 19 Nov. 1968, 158, 16.411
- 9. a. *Kirikhan hd.; Coin Galleries, 29 Sept. 1977, 362, 16.46; Bourgey, 20–21 March 1975, 49, 16.49; Kirikhan hd., 16.91; Kirikhan hd., 16.77
- b. Berlin 1-B, 15.695, ↑; Hirsch, 26 April 1954, 1649, 16.5
- 10. a. *Hunter* 2, p. 307, no. 12. (pl. 49, 18), 15.99
- b. Munich, 15.262, ↑; Albinet et Neret-Minet, 13 June 1979, 2
- c. Schlessinger 13, 4 Feb. 1935 (Hermitage), 1210, 16.5
- d. Feuardent, 17–18 Dec. 1919 (Collignon 1), 320
- e. *Glendining, 18–20 Apr. 1955, 478 = Münzhandlung Basel 10, 15 March 1938, 310, 16.51 = Hess 207, 1 Dec. 1931, 550, 16.51
- f. Riechmann 30, 11–12 Dec. 1924 (Berlin dupl.), 703, 16.40; Coin Galleries, 18 June 1974, 256, 15.51
- 11. a. Hirsch 75, 22–24 Nov. 1971, 184, 16.33
- b. Kirikhan hd., 16.63; Athena, Lagerliste 6, 1979, 31
- c. Kirikhan hd.; Kirikhan hd.
- d. *Kirikhan hd., 16.74
- e. Kirikhan hd.
- f. Berlin 17848, 16.34, ↑; Kirikhan hd., 16.701, ↑
- g. Frey, 24–25 Sept, 1954, 567, 16.26 = Naville 1, 4 Apr. 1921 (Pozzi), 2299, 16.27
- h. MM FPL 355, Apr. 1974, 8, 16.52
- i. Kreisberg-Schulman, 18–21 Mar. 1964 (Brand-Lichtenfels et al.), 39 = Schlessinger 13, 4 Feb. 1935, 1209, 15.8
- j. Sotheby, 15 May 1974, 46; Kirikhan hd, 16.72
- 12. a. *ANS (Newell), 16.28
- b. Coin Galleries, 17 Aug. 1956, 1346 (labelled 1345)

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- 12. a. Kirikhan hd., 16.335, ↑; Hirsch 87, 1–4 Apr. 1974, 142, 16.5
- b. *Peus 283, 14–16 May 1974, 121, 16.60 = Kirikhan hd., 16.59; Schulman FPL 206, 16 Oct.–5 Nov. 1975, 16, 16.52

- c. Kirikhan hd., 16.59, ↑
- d. Berlin (Fox), 16.52, ↑
- e. Paris (Delpierre 2556), 16.25, ↑
- f. Kirikhan hd., 16.44
- g. Kirikhan hd., 16.14
- h. Kirikhan hd., 16.62; Kress 168, 10–11 Mar. 1977, 691
- i. Helbing, 24 Oct. 1927, 3053, 16.7
- j. Dewing coll., 554d, 16.08, ↗
- k. Kricheldorf 11, 11 Oct. 1962, 168, 16.12
- 13. [a. Stack's, 6–7 Sept. 1973, 89, 15.91 = Hirsch 34, 28–30 June 1960, 87; Hirsch 92, 25–27 Mar. 1975, 80, 16.46; Numismatic Fine Arts 4; 24–25 Mar. 1977, 258, 16.44; Schulman FPL 205, June 1975, 59, 16.69
- b. *Kirikhan hd.; Kirikhan hd., 16.81
- c. Kirikhan hd., 16.70
- d. Riechmann 30, 11–12 Dec. 1924 (Berlin dupl.), 702, 15.65
- e. Kress 173, 2–3 Nov. 1978, 470
- 14. [a. *Kirikhan hd., 16.84
- b. 's Gravenhage (van Rede 4623), 16.42, ↑ = Hamburger, 12 June 1930, 799, 16.35
- c. Ciani, 20–22 Feb. 1935 (Grandprey), 165, 16.35
- 15. [a. *Vinchon, 22–24 Feb. 1971, 148
- 16. [a. *Vinchon, 20 Nov. 1961, 143
- b. ANS, 15.98, ↑
- c. Hirsch 34, 28–30 June 1960, 86 = Schulman 232, 9–12 Mar. 1959, 1358, 15.97 = Schulman 231, 6–8 Mar. 1958, 3691, 16.04
- d. Dupriez 90, 12 Dec. 1906, 1
- e. Coin Galleries, 19 Apr. 1962, 924
- f. Hess-Leu 31, 6–7 Dec. 1966, 420, 15.81, ↑ = Egger, 11 May 1914 (Prowe), 717, 15.81
- 17. [a. Auctiones S.A. 7, 7–8 June 1977, 232, 16.71
- b. Paris R 2083, 16.32, ↑ = *Trésors* 18.15, 16.32
- c. *Kirikhan hd., 16.91
- 18. [a. *Stacks, 27 June 1952, 1145 = Hamburger, 27 May 1929 (von Kaufmann), 295, 16.10

19.
 - a. Berlin (Löbbecke), 16.46, ↑; Kirikhan hd., Bourgey, 5–6 Dec. 1977, 91, 16.69; Stack's, 27 Aug. 1940, 98, 16.05
 - b. Naville 14, 2 July 1929 (Churchill et al.), 346, 16.11; Bourgey 17–18 June 1974, 17, 16.67
 - c. Brussels 12: 1899 (du Chastel), 16.34; Kastner 4, 27–28 Nov. 1973, 77, 16.62
 - d. Paris R 2079, 16.61, ↗
 - e. ANS, 15.98, ↗
 - f. Superior Stamp and Coin, 10–12 Feb. 1975, 1993
 - g. Glendining, 16 Apr. 1975, 221
 - h. MM FPL 265, June 1966, 7, 16.33
 - i. Coin Galleries, 9 Mar. 1956, 1603
 - j. Schweizerische Kreditanstalt 27, Winter 1978/9, 44, 16.67
 - k. *Kirikhan hd., 16.70
20.
 - a. Kirikhan hd., 16.69
 - b. L. Walcher de Moltheim, *Catalogue de la Collections des Médailles Grecques de M. Le Chevalier* (Paris-Vienna, 1895), 2012, 16.00
 - c. *SNGDavis*, 253, 16.54, ↑
 - d. *Kirikhan Hoard
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 - a. Paris (Armand-Valton 422), 16.14 ↑
 - b. Kirikhan hd.; Hirsch 87, 1–4 Apr. 1974, 143, 16.71; *SNGvAulock*, 1636, 16.66
 - c. Kirikhan hd., 16.63; Kölner Münz 20, 14–15 Oct., 1976, 35, 16.51; Galerie Numismatique Drouot 7, 20 Oct. 1978, 14, 16.70
 - d. Rosenberg 72, 11 July 1932, 586, 16.85 = Cahn 71, 14 Oct. 1931, 435, 16.94 = Cahn 66, 6 May 1930, 298, 16.94 = Sotheby, 20 July 1914 (Schlessinger y. Guzman), 52; MM FPL 189, Apr. 1959, 25
 - e. Ciani, 17–21 Feb. 1925 (Allotte de la Fuye), 522, 16.70; Graf Klenau 83, 27 Oct. 1973, 2234, 17.025
 - f. Ciani-Vinchon, 6–8 Feb. 1956 (Hindamian), 522, 16.07; Kress 159, 1–2 Apr. 1974, 443
 - g. Kirikhan hd., 16.949, ↑ = Kölner Münz 14, 9–10 Apr. 1974, 35, 16.95; MM FPL 393, Sept. 1977, 12, 16.80

- h. Kirikhan hd., 16.833, ↑ ; Bowers and Ruddy 22, Spring 1975, p. 115, 16.79
 - i. Kirikhan hd., 16.849
 - j. *Kirikhan hd.
 - k. Kirikhan hd., 16.80.
 - l. Kölner Münz 8, 28–29 Sept. 1971, 10, 16.46
 - m. Feuardent, 11–14 June 1913 (Burel), 273
 - n. Hirsch 71, 8–12 Mar, 1971, 198, 16.68
22. [a. Ball 8, 5 Dec. 1932, 2029, 15.3
- b. Kirikhan hd., 16.689, ♂ = Peus 288, 30 Sept.–3 Oct. 1975, 245, 16.69; Kirikhan hd., 16.75
 - c. Brussels 12, avant 1914, 16.15
 - d. Kirikhan hd., 16.73; Kirikhan hd.; Bourgey, 21–22 June 1979, 83, 16.73
 - e. MM FPL 278, July 1967, 6, 16.54
 - f. Helbing, 9 Apr. 1913, 523, 16.30
 - g. Kirikhan hd., 16.87
 - h. *Kirikhan hd.; Kirikhan hd.; Kirikhan hd.
 - i. Kirikhan hd., 16.696, ↑ ; Stockholm 29867, 16.55, ↑ ; Kirikhan hd.
 - j. Kirikhan hd., 16.808, ↑ ; Kirikhan hd., 16.875, ↑ ; Naville 7, 23–24 June 1924 (Bement 2), 1410, 16.31; Kirikhan hd.; Kirikhan hd.; Kirikhan hd., 16.79
 - k. Kirikhan hd., 16.741 = Arne Bruun Rasmussen, 13–14 Sept. 1978, 23, 16.85 = Harmer-Rooke, 28–29 May 1974, 1241, 16.718; Kirikhan hd., 16.945, ↑ ; Kirikhan hd.; Superior Stamp and Coin, 17–23 June 1974, 252; Schweizerische Kreditanstalt FPL 25, Spring 1978, 38, 16.82
 - l. Kölner Münz 22, 7–9 Nov. 1977, 63, 15.35
 - m. Kirikhan hd., 16.870, ↑ ; Kirikhan hd.; Kat. Vren; Rauch 20, 7–8 June 1977, 43
23. a. ANS (Berry), 16.33, ↑ ; Kirikhan hd., 16.70; MM 32, 20 Oct. 1966, 108, 16.56
- b. *Kirikhan hd.; Kirikhan hd., 16.473, ↑ ; MM FPL 345, May 1973, 6, 16.85; 's Gravenhage 5525, 16.07, ↑ ; Hirsch 28, 3–5 Oct. 1961, 1523

- c. Kirikhan hd., 16.749, ↑ = Hirsch 85, 6–9 Nov. 1973, 4090, 16.56 = Hirsch 84, 27–30 June 1973, 99, 16.71; Coin Galleries, 1964–2, B 96, 16.4
- d. Piollet-Sabatier, 25 May 1975, 25, 16.70
- 24. a. *Oslo (Hunt Christian), 16.86, ↑ = *NNA* 1975/6, p. 16, pl. 4, 62
- b. London 1918–2–4–140 (Ford), 16.61
- c. Paris R 2087, 16.59, ↑
- d. Auctiones S.A. 3, 4–5 Dec. 1973, 171, 16.21
- e. MM FPL 205, Nov. 1960, 346
- f. Vinchon, 17–18 Dec. 1973, 25
- g. Berk FPL 1, Apr. 1974, 117
- h. *SNGCop*, 103, 16.09, ↑
- i. *SNGFitz*, 4313, 16.71, ↑
- 25. a. *Neville 5, 18 June 1923 (BM dupl.), 2492, 16.31
- b. Neville 12, 18–23 Oct. 1928 (Bissen et al.), 1747, 15.48 = *Locker Lampson*, 278, 15.47 = Weber, vol. 3, pt. 1, 5502, 15.53
- 26. a. *Munich, 16.108, ↑
- 27. a. *Oxford, 15.99, ↑
- b. Bourgey, 4 Mar. 1960, 72, 15.92
- c. 's Gravenhage 5524, 16.42, ↑
- 28. a. ANS (Newell) 16.27, ↑
- b. Glendining, 21–23 Feb. 1961 (Lockett), 2219, 16.17 = Neville 1, 4 Apr. 1921 (Pozzi), 2297, 16.17
- c. *SNGvAulock*, 1637, 16.47 = Glendining, 31 Jan. 1951, 204
- d. *Paris 66, 16.16, ↑
- e. Numismatica Wien 13, 9–11 Nov. 1976, 248, 16.00
- 29. a. Schlessinger 12, 26 Feb. 1934, 285, 16
- b. Paris (Armand-Valton 423), 15.90, ↑
- c. *Brussels 12: avant 1914, 16.42
- d. Vienna 31.635, 16.42, ↑
- 30. a. *Hess, 6 Jan. 1926 (Löbbecke), 327, 15.7
- 31. a. Ball 6, 9 Feb. 1932, 328, 16.5; Dorotheum 253, 23–24 Oct. 1962, (Sammlung Hollschek), 509, 16.1

- b. Bank Leu 7, 9 May 1973, 213, 15.56, ↑; Kastner 8, 25 Nov. 1975, 57, 16.68, ↑
- c. Sotheby, 1 Dec. 1924, 167
- d. *Sotheby, 8 May 1916 (Headlam), 322 = Egger 39, 15 Jan. 1912, 307, 14.74
- e. H. A. Troxell, *The Norman Davis Collection* (New York, 1969), 205, 16.42, ↑ = Naville 12, 18–23 Oct. 1926, 1748, 16.46.
- 32. a. Schenk 15, 24–26 Oct. 1968, 1522 = Kress 116, 28 Oct. 1960, 387, 16
- b. *Canessa 5, 12 June 1928 (Polese Coll.), 913
- 33. [a. *Frankfurt, Historisches Museum 1167, 16.17, ↑
- 34. [a. Harmer-Rooke, 19 Jan. 1978, 161, 15.68 = Sotheby-PB, 5 Nov. 1976, 151, 15.67
- b. Hirsch 71, 8–12 Mar. 1971, 199, 15.0
- c. *Schulman 243, 8–10 June 1966, 1234, 16.40; Bourgey, 14–15 Dec. 1911 (Chabenat), 134
- d. Ciani-Vinchon, 6–7 May 1955, 217, 16.39
- e. *SNGFitz*, 4312, 15.74, ↑ = Sotheby, 7 Dec 1896 (Bundbury), 132; Stack's, 15–16 Mar. 1979, 181
- 35. a. *Kress 154, 21 Mar. 1972, 216, 15.7
- b. Peus 288, 30 Sept.–3 Oct. 1975, 246, 16.12
- 36. a. *Numismatik Lanz 14, 18 Apr. 1978, 87, 16.45, ↑ = Rauch 15, 8–9 Nov. 1974, 17, 16.45
- b. London 1843–7–26–20, 16.16
- 37. a. Vinchon, 22–24 Feb. 1971, 149 = Schlessinger 13, 4 Feb. 1935 (Hermitage), 1208, 14.5
- b. *B. V. Head *A Guide to the Principal Coins of the Greeks* (London, 1932), pl. 39, 9, 16.20 = Helbing, 20 Mar. 1928, 352, 16.2

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- 38. a. Kreisberg-Schulman, 18–21 Mar. 1964 (Brand-Lichtenfels et al.), 40
- b. *Bank Leu and MM, 3–4 Dec. 1965 (Niggeler 1), 368, 16.57

39. a. Schulman, 25–29 Nov. 1967, 846
 b. *Paris R2084, 16.21, ↑ = *Trésors* 22.30; ANS (Berry), 16.63, ↑; Kirikhan hd.
 c. Paris 71, 16.12, ↑
 d. Kirikhan hd., 16.88; Bourgey, 21–22 Mar. 1972, 56, 16.30 = Naville 1, 4 Apr. 1921 (Pozzi), 2303, 16.30
 e. Kress 164, 18–20 Nov. 1975, 531
 f. Ratto, 4 Apr. 1927, 1867, 16.15 = Ratto, 13 May 1912 (D. Num. Stran.), 915, 16.16
 g. Kirikhan hd., 16.75; Malloy, FPL May–June 1973, 358
40. [a. MM FPL 269, Oct. 1966, 21, 16.52 = Sotheby, 31 Mar. 1976, 65
 b. Saarbrücken (private coll. SKF 42) = Auctiones S.A. 7, 7–8 June 1977, 233, 16.15 = *SNGvAulock*, 1639, 16.20; Frankfurter Münz. 123, 8–9 Mar. 1976, 93, 16.45 = Hess-Leu 24, 16 Apr. 1964, 195, 16.45, ↑; Paris (Delpierre 2558), 16.12, ↑
 c. *Trésors* 20.24; Naville 7, 23–24 June 1924 (Bement 2), 1411, 16.50 = Dupriez 90, 12 Dec. 1906, 7
 d. Vinchon, 27 Feb. 1961, 187, 16.10
 e. Munich, 14.146, ↑
 f. *Paris R2091, 16.40, †; Oxford, 16.68, ↑ = MM FPL 150, Oct. 1955, 11; Asociación Numismática Española, Barcelona, Nov.–Dec. 1961, 304, 16.25; Kricheldorf 14, 7–8 July 1964, 106, 16.28; Myers, 11–12 May 1972, 122
41. a. *SNGvAulock*, 1638, 16.63
 b. Berlin (Löbbecke), 16.08, ↑
 c. Hirsch 89, 8–9 Oct. 1974, 679, 16.75; Kirikhan hd., 16.71
 d. 's Gravenhage, (Van Rede 4624), 15.95, ↑; Naville 15, 2 July 1930, 931, 16.20
 e. Schulman 265, 28–29 Sept. 1976, 162, 16.91; Kirikhan hd. 16.76
 f. *Vienna 33.885, 16.45, ↑ = Hirsch 21, 16 Nov. 1908 (Weber), 2638, 16.45; Glendining, 4 Oct. 1957, 145
 g. Rauch 20, 7–8 June 1977, 41

42. a. *Paris R2088, 16.21, ↗ = *Trésors* 25.9, 16.25; London 1919-12-29-3, 16.39 = Weber, vol. 3, pt. 1, 5501; MM FPL 209, Mar. 1961, 14
43. a. *Paris R2085, 16.65, ↗ = *Trésors* 18.19
b. Kölner Münz. 19, 8-10 Apr. 1976, 48, 16.91
c. Saarbrücken (private coll. SKF2)
44. a. Kirikhan hd., 16.63
b. Cahn 35, 3-4 Nov. 1913, 203, 15.3
c. *Naville 7, 28 Jan. 1924 (Bement 1), 1412, 16.86 = Dupriez 90, 12 Dec. 1906, 8 = Hirsch 31, 6 May 1912, 455, 16.80
45. a. Kirikhan hd., 16.86
b. *Kirikhan hd.
46. a. *ANS (Gantier), 16.18, ↑
47. a. *Kölner Münz 12, 26-28 Mar. 1973, 52, 16.05
48. a. *Paris R2080, 16.41, ↑ = *Trésors* 21.12

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49. a. Paris (Armand-Valton 424), 16.81, ↗
b. Kirikhan hd., 16.94
c. Kirikhan hd. 16.625, ↑
d. *Kirikhan hd.
e. ANS (Ives), 16.07, ↗
f. Dresden 1230, 15.98, ↗
50. a. *MM 19, 5-6 June 1959, 481, 15.725; *BMCTroas*, p. 112, 80, 15.90; Kirikhan hd., 16.60
51. a. Kirikhan hd., 16.93 = Glendining, 6-7 Dec. 1978, 52; Bourgey, 6-8 Dec. 1978, 74, 16.53
b. Glendining, 7-8 Mar. 1957, 263, 16.4
c. Kirikhan hd., 16.70
d. *Paris, R2082, 16.56, ↗ = *Trésors* 18.18, 16.57; Kirikhan hd., 16.69
e. London 1929-12-18-1 (Lawrence), 15.81
f. Kirikhan hd., 16.513, ↗ = Bayerische Vereinsbank 11, April 1976, 34, 16.513 = Banque Populaire du Nord 6, Dec. 1978, 192

- g. Paris 62, 15.99, ↗
- h. Kirikhan hd., 16.57
52. [a. Boston 1651, Brett, 16.23; Glendining, 1 Sept. 1976, 27
= Bourgey, 10–12 Mar. 1976, 93, 16.84
- b. Naville 17, Oct. 1931, 547, (Burrage et al.), 16.27 =
Naville 1, 4 Apr. 1921 (Pozzi), 2302, 16.27
- c. Berlin (Löbbecke), 16.35, ↑; Kirikhan hd., 16.42
- d. Kirikhan hd., 16.64
- e. Kirikhan hd., 16.76
- f. Kirikhan hd., 16.73 = Crowther FPL Coins and An-
tiquities, 1974–2, G 679 = Sotheby, 7 May 1975, 138,
16.71
- g. Kirikhan hd., 16.70
- h. London 1913–2–12–37 (Lang), 15.44
- i. *Kirikhan hd., 16.61
- j. Kirikhan hd.
- k. Kirikhan hd.
53. [l. Kirikhan hd.
- a. Coin Galleries, 20 Nov. 1975, 2047, 16.48 = Coin Gal-
leries, 21 Nov. 1974, 503
- b. *Kirikhan hd., 16.25
- c. Kirikhan hd., 16.45
- d. Kirikhan hd., 16.72
- e. Kirikhan hd.
- f. Kirikhan hd., 16.66
- g. Kirikhan hd., 16.31
- h. Malloy 9, 9 May 1977, 123 = Coin Galleries, 29 Sept.
1977, 361, 16.57
- i. Paris (*de Luynes* 2524), 16.54, ↗
- j. Sotheby, 22 Apr. 1970, 193, 16.31, ↗ = Florange, 10
Feb. 1926 (Caron 2), 219, 16.28
- k. Brussels 46.047, 16.29 = Schulman 228, 4–6 Feb.
1957, 1226, 16.3 = Ciani & Vinchon, 6–8 Feb. 1956,
524, 16.31 = Bourgey, 27 Mar. 1912, 193
- l. Kirikhan hd., 16.84, ↗ = Peus 282, 30 Oct.–1 Nov.
1973, 147, 16.70

- m. *BMCTroas*, p. 112, 81 (pl. 21, 8), 15.66
- n. 's Gravenhage 5528 (Hole), 15.81, ↗
- 54. a. *Kirikhan hd., 16.73

EUKTEMON

- 55. a. Superior Stamp and Coin, 30 Mar.–3 Apr. 1971, 207 = MM FPL 303, Aug. 1969, 5, 16.02; Vinchon, 17–18 Dec. 1973, 26; Feuarent, 17 Dec. 1919 (Collignon), 319
- b. Ratto, 16.17 May 1935, 272, 16.41 = Ratto, 4 Apr. 1927, 1865, 16.44
- c. Frankfurter Münz. 123, 8–9 Mar. 1976, 94, 16.5; Kastner 4, 27–28 Nov. 1973, 79, 16.83, ↑; Naville 12, 18–23 Oct. 1926 (Bissen et al.), 1750, 16.57
- d. Kirikhan hd.
- e. ANS (Newell), 16.05, ↗
- f. Paris 74, 16.00, ↑
- g. Berlin (Prokesch-Osten), 15.76, ↑
- h. Kirikhan hd.
- i. H. A. Troxell, *The Norman Davis Collection* (New York, 1969), 206, 16.31, ↗
- j. Kirikhan hd. 16.74; Superior Stamp and Coin, 17–23 June 1974, 244
- k. *Kirikhan hd., 16.88
- 56. a. *Bank Leu FPL “Hippikon,” Dec. 1970, 80, 16.13 = Hirsch 12, 25–27 Apr. 1957, 153, 16.1; Sotheby, 4–5 Apr. 1973 (Ward), 536, 16.12, ↑
- b. Athens 1981/2 K9:193, 16.286, ↑
- c. 's Gravenhage 5526, 16.01, ↑
- 57. a. Kirikhan hd., 16.73
- b. *Kirikhan hd., 16.74
- c. Paris R2090, 16.42, ↑ = *Trésors* 22.18
- d. Berlin (Löbbecke), 16.78, ↑
- e. Vienna 31.788, 15.05, ↑
- f. MM FPL 198, Mar. 1960, 6
- g. Platt, 23–25 Apr. 1934, 79; *BMCTroas*, p. 112, 77 (pl. 21, 7), 16.33

SEUTHES

58. a. *Sotheby, 10 May 1978, 75; Hirsch 107, 6–8 Dec. 1977, 2332, 16.79; Kress 172, 4–6 July 1978, 525
59. a. *Kirikhan hd., 16.75; Paris (Armand-Valton 425), 14.69, ↑; Lanz Graz 10, 3 Dec. 1977, 170, 16.11, ↑
 b. 's Gravenhage 5527, 16.31, ↑
 c. MM 52, 19–20 June 1975, 175, 16.82
 d. *SNGFitz* 4310, 16.62, ↑ = Sotheby, 3 July 1911 (Butler), 217
 e. ANS (Gantier), 16.74, ↑; *SNGFitz* 4311, 15.83, ↑ = Naville 1, 4 Apr. 1921 (Pozzi), 2301, 15.84
 f. Winterthur 2829, 16.78, ↑ = Cahn 60, 2 July 1928, 800, 16.75 = Naville 7, 23–24 June 1924 (Bement), 1413, 16.77; MM FPL, 257 Sept. 1965, 7, 16.52
 g. Stack's, 24–28 Aug. 1976 (American Numismatic Association) 1574, 16.93
 h. Egger 45, 12 Nov. 1913, 553, 16.20
 i. Hess and Leu, 12–13 Apr. 1962, 277, 16.56, ↑
 j. Kricheldorf, 28–29 May 1956, 1076
 k. Bourgey, 17–18 June 1974, 19, 16.76
 l. Superior Stamp and Coin, 19–23 Aug. 1975, 3320
 m. *McLean* 7901, 16.1, ↑; Auctiones S.A. 10, 12–13 June 1979, 178, 16.95
 n. MM FPL 405, Oct. 1978, 18, 16.87
 o. Hirsch 71, 8–12 Mar. 1971, 200, 15.72
60. a. **BMCTroas*, p. 112, 78, 16.49
 b. Berlin (Prokesch-Osten), 15.99, ↑
61. a. Paris 70, 16.62, ↑; Kirikhan hd., 16.684, ↑
 b. Schulman 265, 28–29 Sept. 1976, 164, 16.75; *SNGvAulock*, 1640, 16.66
 c. **BMCTroas*, p. 112, 79, 16.55; Stack's, 15–16 June 1972, 430, 16.17 = Myers, *A Numismatic Pantheon* (1972), 62; *Trésors* 22.26, 16.83
62. a. *ANS (Berry), 16.56, ↑ = *Trésors* 19.16

DEMETRIOS

63. a. Paris R2086, 15.95, ↑ ; *BMCTroas*, p. 112, 76 (pl. 21, 6), 13.30
 b. London 1924-7-20-14 = *NC* 1969, pl. 4, 91; Kirikhan hd., 16.77
 c. Paris 64, 16.73, ↑
 d. *Kastner 10, 18 May 1976, 53, 16.75, ↑

HERAKLEIDES

64. a. *ANS (Gantier), 16.61, ↑
 b. *SNGCop*, 105, 16.11
 c. Bayerische Vereinsbank 12, Nov. 1976, 89, 16.84
 d. Paris 65, 14.86, ↑
65. a. Florence
 b. ANS (Newell), 16.06. ↗ = Naville 17, 3 Oct. 1934 (Burrage et al.), 548, 16.14
 c. Superior Stamp and Coin, 17-23 June 1974 (Ruby), 243
 d. Glendining, 15-17 July 1929, 413
 e. *Bank Leu 15, 4-5 May 1976, 285, 16.96, ↑ = Kastner 4, 27-28 Nov. 1973, 78

PHILODOXOS

66. a. *Paris 72, 15.97, ↗; ANS (Newell), 15.90, ↑
 b. Vienna 37.483, ↑ = Hess, 18-19 Mar. 1918, 672, 15.58
 c. *SNGFitz*, 4309, 15.73
67. a. *Hirsch 98, 9-11 June 1976, 2575, 14.42
68. a. *Paris R2089, 14.83, ↗
69. a. *Grabow 14, 27-28 July 1939, 463, 14.9 = Ball 8, 5 Dec. 1932, 2030, 15.0
70. a. *Hess, 224, 18 Feb. 1936, 1312, 14.3 = Hirsch 12, 25-27 Apr. 1957, 154

71. a. **BMCTroas*, p. 111, 75 (pl. 21, 5), 15.17
 72. a. *Berlin (Fox), 16.195, ↓

ALEXANDROS

73. a. **BMCTroas*, p. 112, 82, 16.14

DIOGENES

74. a. *Paris (Delpierre 2555), 16.77, ↑ = Bourgey, 5 Dec. 1932, 216
 b. *BMCTroas*, p. 112, 84 (pl. 21, 9), 16.72; Bourgey, 21–22 June 1979, 82, 16.53
 c. Berlin (Imhoof-Blumer), 15.94, ↑
 d. Bourgey, 9–10 Nov. 1976, 82, 16.57
 75. a. *ANS (Berry), 16.49, ↑; Asociación Numismática Española, Barcelona, 21–22 June 1968, 89, 16.60 = Boehringer, pl. 39.12, 16.55
 b. Munich, 15.758, ↑
 c. Paris 73, 16.39, ↑; *SNGvAulock Nach*, 7697, 16.76
 d. Vienna 33.886, 16.75, ↑

AMPHIKTYON

75. a. *Kirikhan hd., 16.73
 b. Kress 173, 2–3 Nov. 1978, 469
 c. ANS (Newell), 16.31, ↑ = Sotheby, 3 Feb. 1909 (Benson), 659
 76. a. Berlin (Alter Bestand), 16.69, ↑
 b. *ANS (Gantier), 16.53, ↑; Hirsch, 26 Apr. 1954, 1648, 16.9
 c. Paris R2081, 16.62, ↑ = *Trésors*, 22.16
 77. a. Kirikhan hd., 16.73; Kirikhan hd., 16.62; Stack's, 19–20 June 1969 (Fowler), 159, 16.68 = Boehringer, pl. 38, 11

- b. *Kirikhan hd., 16.74
- c. Rauch 22, 9–10 Mar. 1978, 106
- 78. a. *Kirikhan hd., 16.73; Paris 63, 15.81, ↑
- b. Paris R2078, 16.69, ↗
- c. Kress 158, 8–9 Nov. 1973, 409
- d. Hirsch 87, 1–4 Apr. 1974, 146, 16.87
- 79. a. *Kirikhan hd., 16.92
- b. Kölner Münz. 14, 9–10 Apr. 1974, 36, 16.69
- c. Hirsch 87, 1–4 Apr. 1974, 147, 16.93
- d. *BMCTroas*, p. 112, 83, 16.75

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THE UNIQUE PORTRAIT TETRADRACHM OF EUMENES II

(PLATES 15–16)

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Among the profusion of regnal coinages issued by the hellenistic monarchies of the third and second centuries B.C. the absence of personal portraits on the coinage of the Attalid Kings of Pergamum presents a remarkable numismatic exception.¹ Unlike their contemporaries who distinguished themselves with portraits and identifying inscriptions on at least the principal silver coinages of their kingdoms, the Pergamene rulers continued to issue the original dynastic type introduced by Philetaerus without changing either the obverse portrait of the founder or the reverse depiction of the dynasty's patron goddess, Athena (Plate 15, 5).² This pattern was altered neither in the late third and

¹ I wish to thank Martin Price and Eric Gruen for their characteristically incisive and spirited criticisms of an earlier draft of this paper, Nancy Waggoner for her generous assistance during the final stages of its preparation, Otto Mørkholm for supplying the illustration of the beautifully preserved Athena Nikephoros tetradrachm (Plate 15, 1) recently acquired by the Royal Coin Cabinet in Copenhagen, Ulla Westermark for sending me proofs of her forthcoming article also dealing with the portrait of Eumenes II (see below, n. 4), and the Emory University Research Committee for a travel grant which enabled me to examine the Eumenes tetradrachm in the British Museum. A condensed version of this paper was presented at the annual meeting of the Archaeological Institute of America in December 1980.

² On the date of introduction of the Philetaerus type see E. T. Newell, *The Pergamene Mint Under Philetaerus*, ANSNNM 16 (1936); the basic study of the Philetaerus coinage is U. Westermark's, *Das Bildnis des Philetairos von Pergamon*, Uni-

early second century when supplementary Alexander tetradrachms were issued nor during the second quarter of the second century when the so-called cistophoric coinage, which bore no portrait, replaced the standard Philetaerus type as the principal regnal coinage (Plate 15, 4).³

There is, however, a single extraordinary exception to the normally unpretentious style of the Attalid coinage. A unique and somewhat worn Attic-weight tetradrachm in the British Museum has on its obverse a diademed portrait of Eumenes II, who reigned from 197 to 159 B.C., and on the reverse two nude male figures wearing capes and holding staffs, flanked by the inscription ΒΑΣΙΛΕΩΣ ΕΥΜΕΝΟΥ all of which is surrounded by a laurel wreath (Plate 15, 2). In spite of the fact that this coin is well known and has been discussed by scholars for nearly a century, no consensus as to the precise date of its emission has been achieved nor has the reverse iconography ever been convincingly interpreted.⁴ The purpose of this paper is to offer a fresh exam-

versity of Stockholm Studies in Classical Archaeology 1 (Stockholm, 1960) (hereafter, *BPP*) which supercedes the pioneer works of F. Imhoof-Blumer, *Die Münzen der Dynastie von Pergamon* (Berlin, 1884) and H. von Fritz, *Die Münzen von Pergamon* (Berlin, 1910). On the dating of the latest Philetaerus issues (Westermarck's Group VIB-VII), see N. Olçay and H. Seyrig, *Le trésor de Mektepini en Phrygie* (Paris, 1965), pp. 30-31, and C. Boehringer, "Hellenistischer Münzschatz aus Trapezunt 1970," *SNR* 54 (1975), pp. 57-59 (hereafter, "Trapezunt").

³ On the Pergamene posthumous Alexanders, see C. Boehringer, *Zur Chronologie Mittelhellenistischer Münzserien 220-160 v. Chr.* (Berlin, 1972), pp. 41-44, 191 (hereafter, *ZCMM*); and F. S. Kleiner, "The Alexander Tetradrachms of Pergamum and Rhodes," *ANSMN* 17 (1971), pp. 95-125, with Boehringer's critique, "Kommentaire zur Literatur über Antike Numismatik," *SNR* 53 (1974), pp. 16-17. On the cistophoric coinage, see now F. S. Kleiner and S. P. Noe, *The Early Cistophoric Coinage* (New York, 1977) (hereafter, *ECC*) which supercedes all previous studies; but on the date of introduction, see further O. Mørkholm, "Some Reflections on the Early Cistophoric Coinage," *ANSMN* 24 (1979), pp. 47-62 (hereafter, "Reflections"); and F. S. Kleiner, "Further Reflections on the Early Cistophoric Coinage," *ANSMN* 25 (1980), pp. 45-52 (hereafter, "Further Reflections").

⁴ According to G. K. Jenkins (quoted by U. Westermarck, "The Portrait Coin of Eumenes II of Pergamon," *LAGOM Festschrift für Peter Berghaus zum 60. Geburtstag am 20. November 1979* [Münster, 1981], p. 19 [hereafter, "Portrait Coin"]), the Eumenes tetradrachm was acquired by the British Museum in 1849 from the collection of Sir T. Reade and nothing is known about the circumstances of its discovery. See: B. V. Head, *Guide to the Principal Gold and Silver Coins of the Ancients*, 2nd ed. (London, 1881), p. 89, Imhoof-Blumer (above n. 2), pp. 13, 39;

ination of the Eumenes tetradrachm based on evidence which in part has not been available to previous commentators.

In 1968 a large hoard discovered at Sitichoro in Thessaly (*IGCH* 237) produced a previously unknown Attic-weight tetradrachm variety struck in honor of Athena Nikephoros, the principal tutelary deity of the Attalid Kingdom (Plate 15, 1). The obverse of this issue (now known from two other examples)⁵ depicts the head of Medusa, and the reverse an archaistic cult statue of Athena flanked by the inscription ΑΘΗΝΑΣ ΝΙΚΕΦΟΡΟΥ. Scholars have thus far agreed that the Sitichoro hoard was buried during the turbulent years near the end of the Third Macedonian War (ca. 168/7, e.g. M. J. Price, *IGCH* 237); and it has been argued quite reasonably that the Athena Nikephoros tetradrachms represent a special commemorative (or publicity) issue struck in honor of Eumenes II's reorganization of the penteteric Nikephoria festival in 182/1.⁶ What is important for our purposes is that the Athena Nikephoros issue does not have a *wreath* on its reverse.

W. Wroth, *BMCMysia* (1892), p. 117; K. Meischke, "Symbolae ad Eumenis II Pergamenorum regis historiam" (diss. Leipzig, 1892), pp. 1–7; K. von Fritz, "Birytis und die Kabiren auf Münzen," *ZfN* 24 (1904), pp. 118–25, and above, n. 2, p. 11; Head, *HN*, p. 533; E. J. Seltman, "Unpublished Gold Staters Issued by an Attalid King," *JIAN* (1913), p. 84; J. N. Svoronos, "Stylides et ancres hierae," *JIAN* 16 (1914), pp. 84, 86; R. Carpenter, *MAAR* (1941), p. 79; E. S. G. Robinson, "Cistophori in the Name of King Eumenes," *NC* 1954, p. 7; M. Bieber, *Sculpture of the Hellenistic Age* (New York, 1955), p. 113; U. Westermark, *BPP* (above, n. 2), pp. 39–42; G. Richter, *The Portraits of the Greeks*, vol. 3 (London, 1965), p. 274; E. Hansen, *The Attalids of Pergamon*, 2nd ed. (Ithaca, 1971), pp. 128, 219–20 (hereafter, *Attalids*); C. Boehringer, *ZCMM*, pp. 11–14, 145; G. K. Jenkins, *Ancient Greek Coins* (New York, 1972), pp. 231, 240; N. Davis and C. Kraay, *The Hellenistic Kingdoms* (London, 1973), no. 185; O. Mørkholm, "Chronology and Meaning of the Wreath Coinages of the Early 2nd Cent. B.C.," *NumAntClass* 9 (1980), pp. 154–55 (hereafter, "Wreath Coinages"); Westermark, "Portrait Coin," pp. 19–23.

⁵ The first example is now in the Cabinet des Medailles, see G. le Rider, "Un tétradrachme d'Athéna Niképhoros," *RN* 15 (1973), pp. 66–79; the second, Bank Leu 7, May 1973, 207, is now in the British Museum, see M. J. Price, *BM Bulletin* 27 (March 1978); and the third, which reportedly derives from the so-called Syria 1980 hoard to be published by M. J. Price, has been acquired by Copenhagen. On the attribution of the second example to the Sitichoro 1968 hoard, see Boehringer, "Trapezunt," pp. 58–59, and Price.

⁶ See le Rider, (above, n. 5); C. P. Jones, "Diodoros Paspáros and the Nikephoria of Pergamon," *Chiron* 4 (1974), pp. 183–205; O. Mørkholm, "Reflections," pp. 47–48.

Considerable controversy continues to surround the question of just when in the second century and for what reasons numerous Greek states introduced Attic weight tetradrachm coinages bearing wreaths on their reverses; and this is not the place to attempt any discussion or even review of the evidence.⁷ It seems fair, however, to point out specifically in regard to a single mint such as Pergamum that, given the widespread preference for the wreath-bearing type among the majority of city-states of western Asia Minor once it began to appear, it is unlikely that the *wreath-bearing* Eumenes portrait issue would be earlier than the *unwreathed* Athena Nikephoros issue; and we may therefore assume that the Eumenes portrait is later than the special emission of 182/1.⁸

Until quite recently, this point might have been considered to be meaningless, since it has been strongly argued that *none* of the Asiatic wreath-bearing tetradrachms were minted until after the end of the Third Macedonian War (i.e. 167 B.C.).⁹ However, an extraordinary *wreathed* posthumous Alexander tetradrachm of Erythrae (Plate 15, 3) acquired by the American Numismatic Society in 1979 has been shown by O. Mørkholm to have been struck from the same obverse die as an unwreathed Alexander in the Latakia 1759 hoard (IGCH 1544) which

⁷ The most recent discussions are Mørkholm, "Wreath Coinages," pp. 145–58 and N. Waggoner, "Coins from the William P. Wallace Collection," *ANSMN* 25 (1980), pp. 11–15; see also the discussions in studies of individual mints: "The Autonomous Wreathed Tetradrachms of Magnesia-ad-Maeandrum," N. Jones, *ANSMN* 24 (1979), pp. 63–109; J. Oakley, "The Autonomous Wreathed Tetradrachms of Kyme, Aeolis," *ANSMN* 27 (1982), pp. 1–37.

⁸ Of course, the Athena Nikephoria tetradrachm is by no means the only unwreathed Attic-weight issue of the first half of the second century; but the wreathed style, for whatever reasons, became far more popular for civic issues. It was struck at a minimum of 17 mints (excluding Pergamum): Athens, Chalcis, Eretria, Syros, Cyzicus, Abydos, Tenedus, Mytilene, Myrina, Aegae, Cyme, Smyrna, Lebedus, Colophon, Magnesia-ad-Maeandrum, Heraclea-ad-Latmum, and Myndus, compared to nine known unwreathed types: Thasos, Maroneia, Samothrace, Parium, Lampsacus, Samos, Miletus, Cnidus, Cos. At present, Pergamum is the only state known to have minted special issues of both varieties.

⁹ In particular, Boehringer, *ZCMM*, pp. 14–19; and A. Giovannini, *Rome et la circulation monétaire en Grèce au II^e siècle avant Jésus-Christ*, Schweizerische Beiträge zur Altertumswissenschaft 15 (Basel, 1978), pp. 4–7, 16.

was buried ca. 169 B.C.¹⁰ The Erythraean Alexander thus provides the first indisputably *objective* evidence that wreathed tetradrachm issues were already appearing in Western Asia Minor during the late 170s and means, therefore, that the wreathed portrait issue of Eumenes II cannot be automatically assigned to the period after 167.

Unfortunately, there remains no undisputed numismatic evidence to establish a more precise terminus ante quem of the portrait issue than that provided by the death of Eumenes II in 159. In particular, although the most recent study of the lighter-weight (ca. 12.5 g) cistophoric coinage of Pergamum has connected its introduction with Eumenes II and concluded that all Attic-weight issues were terminated at that time, the authors are unable to fix the date of introduction within the outside limits of ca. 180–160.¹¹ For primarily historical reasons, they propose ca. 166 as the starting date; but Mørkholm has subsequently used essentially the same historical evidence to argue (no less convincingly) that the mid-170s must be the beginning point.¹² For this reason, all that can be said at present is that if, in fact, no further Attic-weight issues were produced after the initial series of cistophors, then the Attic-weight portrait must also date from the period prior to the introduction of the cistophoric coinage.¹³

It must be added that there may be a direct connection between one issue of the final period of the Attic-weight Philetaerus coinage (Westermarck's class VIB-VII) and the portrait tetradrachm. As Boehringer has pointed out,¹⁴ Westermarck's Philetaerus obverse 129 has

¹⁰ Mørkholm, "Wreath Coinages," pp. 154–56, where a second wreathed Alexander of Erythrae recently discovered in the Cabinet des Medailles with the same obverse but different reverse die is also published.

¹¹ *ECC*, pp. 10–18, reiterated by Kleiner, "Further Reflections," pp. 46–48.

¹² Mørkholm, "Reflections," pp. 47–50.

¹³ Kleiner may not be correct in arguing that all Attic-weight coinage ceased after the introduction of the cistophors; but this is not the proper place to re-examine the question. I can only point out that there exists both new and old evidence regarding the date of introduction, the sequence of issues, and the relationship between the cistophoric and Philetaerus coinages which has not yet been discussed by any of the previous commentators on this problem. The author is currently preparing a discussion of this evidence to be published, hopefully, in the immediate future.

¹⁴ *ZCMM*, pp. 11–14.

virtually identical controls to those found on the portrait issue. Together with a thyrsos, the Philetaerus tetradrachm has a second control of ΔI (Plate 15, 5) while the Eumenes portrait was a thyrsos and $\Delta I \Lambda$ (Plate 15, 2). Once again, however, this possible connection cannot yet provide any reliable chronological evidence, because the Philetaerus thyrsos ΔI issue cannot as yet be more closely dated than ca. 190–160 due to the present lack of die linkage and uncertain hoard record for the latest Philetaerus series.¹⁵

To summarize at this point, we can say that the best *numismatic* evidence currently available is only able to fix the date of the Eumenes II portrait issue within the rough limits of ca. 180–160. If, however, we turn to the iconography of the portrait issue, I believe that it will be possible to discover not only the key to understanding the issue but also to placing it within an exact historical context.

Unlike most civic tetradrachms of the second century, and indeed both the regnal and Athena Nikephoros tetradrachms of Pergamum itself, the figures of the portrait tetradrachm's reverse represent neither the principle civic (or dynastic) deity nor an obviously identifiable civic (or dynastic) motif.¹⁶ As a result, the existence of a similar depiction, conveniently labelled $\Theta \Omega \text{N K A B E I P} \Omega \text{N} \Sigma \text{Y P} \Omega \text{N}$, on Attic-

¹⁵ Nevertheless, Boehringer, "Trapezunt," pp. 57–59, is no doubt right to argue that Westermarck obverse 129 does not belong to the outset of the period, since it derives from the Babylon 1900 hoard (*IGCH* 1774) buried ca. 155–150 (Plate 15, 5) and is stylistically very close to one (no. 98) of two latest period Philetaerus tetradrachms in the Trabzon 1970 hoard buried ca. 150. However, Boehringer's own proposed date of ca. 164 for the Eumenes portrait issue seems to be influenced more by his post-167 theory for all wreathed tetradrachms (see above, n. 9) than by any specific numismatic or historical evidence. In any case, Boehringer's blanket late dating of the Philetaerus Group VII types on the basis of the Babylon and Trabzon hoards is not supported by the parallel of the five Chian Alexanders in the Babylon 1900 hoard, since one was minted before ca. 190, two before ca. 170, and two in the 160s (see R. Bauslaugh, "The Posthumous Alexander Coinage of Chios," *ANSMN* 24, pp. 29–36). Westermarck's assertion in "Portrait Coin" that the portrait tetradrachm is "without any close connection with the standard coinage of the period" is made without discussion or reference to Boehringer's proposed identification.

¹⁶ Examples of the latter variety include a horse (Cyme), owl and cornucopiae (Lebedus), club (Heraclea), eagle (Abydus), double axe (Tenedos).

weight tetradrachms struck by the Cycladic island of Syros (Plate 16, 7) has been widely thought to explain the intended iconography of the Pergamene reverse type. The current consensus thus holds that the figures on the Eumenes tetradrachm are either meant to represent the Kabeiroi—as Syros—or the Dioskouroi, the better known heavenly twins with whom the Kabeiroi were generally identified in antiquity.¹⁷

In spite of the obvious similarities between the Syran and Pergamene reverses it is, in fact, not the points of similarity but the differences which are crucial for understanding the intended iconography of the Eumenes tetradrachm. Close comparison of the stance adopted by the respective figures reveals that on the Syran reverse both figures are meant to have essentially the same frontal stance while on the Pergamene reverse the left figure adopts a noticeably different stance from the figure on the right (compare Plate 16, 7 and 8). The left figure is slightly shorter than his counterpart, bends his left knee more acutely, has his right arm raised so that it points toward the right figure, holds his staff loosely nestled in his left arm so that it inclines toward the right, and turns his head to the left in order to look—slightly upward—toward the figure on the right. In short, the left-hand figure adopts a markedly deferential pose in respect to the right-hand figure.

This point becomes clearer if one compares the Syran and Pergamene reverses with a nearly contemporary drachm type struck by King Eukratides of Bactria (167/6–156) (Plate 16, 9).¹⁸ The Bactrian de-

¹⁷ This has been the case with virtually all commentators since the first edition of Head's *Guide* in 1880 (see above, n. 4, citing Head's 2nd ed. and other references). For dissenting views see below, n. 22. The basic study of the gods is B. Hemberg, *Die Kabiren* (Uppsala, 1950); see below, n. 21, on the cult at Pergamum. Regarding the tetradrachm of Syros, any direct connection is unlikely, since the hoard record for Syros suggests that the Syran issue was minted after rather than before 160. Examples appear in the Akkar 1956 hoard (*IGCH* 1559) buried ca. 150, Kirikhan (or Cilicia) 1972 hoard (*Coin Hoards* 1, 87 A, 87 B; 2, 90) buried ca. 140, and Aleppo ca. 1930 hoard (*IGCH* 1562) buried ca. 138. Standing representations of the Kabeiroi or Dioskouroi are, however, rare enough that the possibility that the Syrans consciously imitated the Pergamene design cannot be ruled out; see below, n. 19, on the numismatic iconography of the Twins.

¹⁸ The Bactrian example comes after Eucratides assumed the title *Megas* (exact date uncertain) and is not previously known on Bactrian coinage; see M. Allouche-Le Page, *L'Art monétaire des royaumes bactriens* (rpt. Paris, 1956) who notes that

piction is essentially identical to the Syran in its simple rendition of the two figures as mirror images of each other without any meaningful differentiation.

In addition to this difference in depiction, there is a second important difference between the Pergamene and Syro-Bactrian types. In personifications of both the Kabeiroi and Dioskouroi, stars normally appear above the heads of the the twins as a special identifying symbol. This feature is clearly visible on both the Syran and Bactrian types (see Plate 16, 7 and 9) and is faithfully included on any number of other numismatic depictions of the Divine Twins¹⁹—but not on the Eumenes reverse (Plate 16, 8). Even if the Pergamene figures are wearing the caps (*pilei*) associated with the Twins, as does seem to be the case,²⁰ it remains that the Pergamene depiction is quite exceptional

the Dioskouroi are also occasionally featured on Seleucid coinage where there was a particularly close parallel to Eucratides' equestrian representation struck under Antiochus VI (145-142/1) (Plate 16, 11 and 12; see also below, n. 19). R. J. Walker, "Dioscuri on Ancient Coins," *Numismatist* 71 (1958), pp. 519-55, does not mention any of these issues or Pergamum.

¹⁹ See e.g. Plate 16, 11 and 12. In general, the heads of the Dioskouroi or Kabeiroi appear sporadically on coins from the late fifth century onward (e.g. Head, *HN*, pp. 265, 494, 525-26, 530, 542, 692, 887; Newell, *ESM*, pp. 129-30, *WSM*, pp. 18-19, 56-59, etc.); their caps (or *pilei*) surmounted by stars (e.g. Head, pp. 261-62, 492; P. Gardiner, *The Coins of the Greek and Scythic Kings of Bactria and India* [1886, rpt. Chicago, 1966], p. 18; M. Thompson, *The New Style Silver Coinage of Athens* [New York, 1961], pp. 49-50, 320-26, etc. [as secondary symbol only]); and mounted on horseback (e.g. Gardiner, pp. 16-17; Newell, *WSM*, pp. 64-65, 67, 221, etc.; C. Kraay and M. Hirmer, *Greek Coins* [New York, 1968], pl. 206, 752). Some third century Seleucid versions of the caps are exceptional for their omission of the stars (e.g. Newell, *WSM*, pp. 217-19, 223, 386). From the first half of the second century onward, however, it is clear that the iconography of any representation demanded the stars. There is no numismatic representation of the Dioskouroi or Kabeiroi standing together which can be dated with certainty earlier than the Eumenes tetradrachm. In fact, I have been able to discover only four mints where the gods were depicted together in frontal pose from the second century or before: (1) Pergamum (ca. 180-160); (2) Bactria (beginning with Eucratides [ca. 171-156/5]); (3) Athens (as a secondary symbol only from 156/5 using Thompson's chronology); and (4) Syros (ca. 160-155). On Syros, see above, n. 17.

²⁰ This was proposed with hesitation by Wroth (above, n. 4), p. 117; but as certain by Westermarck, "Portrait Coin"; upon inspection under magnification, Martin Price and I agreed that some type of conical headdress is intended (see Plate 16, 8).

in its omission of the stars which identify and indeed symbolize the special protective divinity of the Kabeiroi-Dioskouroi.

Moreover, there also remains a basic question of why the dynasty's principal tutelary deity, Athena, would be passed over in favor of what could only be—if divinities are, in fact, intended—a depiction of the Kabeiroi-Dioskouroi. These deities are not known to have been exceptionally important cult figures at Pergamum; and the theory that they are honored for bringing a naval victory explains neither the peculiar iconography nor the otherwise undistinguished role they have at Pergamum.²¹ Nor is this problem solved by a recent suggestion that Eumenes' intention was not to depict on the reverse the Kabeiroi-Dioskouroi but himself and his brother Attalus.²² While the anomalous iconography may make this theory attractive, especially since some of Eumenes' contemporaries did immodestly portray themselves on their coinages in identifiably divine guises,²³ it leaves unsolved the questions of why Eumenes would abandon his otherwise unpretentious style of kingship in order to depict himself and one of his brothers as gods on this single occasion and why he would single out any one brother,

²¹ On the cult at Pergamum, see E. Ohlmutz, *Die Kulte und Heiligtümer der Götter in Pergamon* (1940, rpt. Darmstadt, 1968), pp. 192–201; and Hansen, *Attalids*, pp. 434–38. The cult is indeed an early one; but as von Fritz (above, n. 4), p. 120, pointed out long ago, there is really no physical or other evidence to suggest that it was in fact a *significant* cult under the Attalids. Because the gods were revered as the protectors of seafarers, several previous commentators have sought to connect the Eumenes tetradrachm with some important naval victory which Eumenes might have won during his reign. Unfortunately for this approach, there exists no record of any such victory; and attempts to date the coin to this or that period of naval activity are basically unconvincing.

²² G. Hafner, "Pergamenische Herrscherbildnisse," *Aachener Kunstblätter* 40 (1971), p. 164, n. 53, who sees the reverse as possibly inspired by a contemporary statue group of Eumenes and Attalus.

²³ See e.g. Plate 15, 6, an Attic-weight tetradrachm of Mithradates IV of Pontus (170–150) who is represented on the obverse with his sister and wife Laodice. On the reverse, the royal couple is clearly equated with Zeus and Hera. Note especially the significant arrangement of the inscriptions with the name Mithradates beside Zeus and Laodice beside Hera, as Kraay and Hirmer (above, n. 19), p. 377, have pointed out.

when he had not one but *three* brothers, all of whom are known to have been highly esteemed and trusted by the king.²⁴

In my opinion, the best evidence for answering all these questions, including the exact date of the portrait issue, is provided by a neglected piece of epigraphical evidence discussed in 1906 by the noted hellenistic historian William S. Ferguson.²⁵ The inscription involved (*OGIS* I, 302) is a dedication discovered in an area of the Thracian coast controlled by Pergamum between the years 189 and 167:

‘Υπὲρ Βασιλέως Εὐμένου φιλαδέλφου
Θεοῦ καὶ Εὐεργέτου Δημήτριος Ποσειδωνίου

“Demetrios, son of Poseidonios, in honor of King Eumenes, Philadelphos, Theos, Euergetos.”

Ferguson pointed out that several aspects of this simple dedicatory inscription are very peculiar: (1) the syntax of the inscription is appropriate to a dedication in honor of a *living* ruler, yet the title “Theos” is otherwise known exclusively for deceased rulers who are accorded divine honors, (2) the title “Philadelphos” is nowhere else attested for Eumenes II but is rather the special title adopted by his brother and successor Attalus II, and (3) there is no mention of Eumenes’ wife

²⁴ See Hansen, *Attalids*, pp. 70–129, whose detailed discussion of Eumenes II’s reign makes it quite clear that Eumenes was always even-handed in his treatment of his brothers (Attalus, Philetaerus, and Athenaeus) all of whom repeatedly served in the highest positions of military and political authority. Athenaeus, for instance, was in charge of the Pergamene fleet in 188 (Hansen, pp. 91–92) and Philetaerus acting chief of state in 171 (Hansen, p. 112). All three brothers were sent to Rome to represent Eumenes in winter 181/180 (Hansen, p. 102) while Attalus and Athenaeus went together in 164 (Hansen, p. 125). This is not to deny the obvious fact that Eumenes considered Attalus his heir apparent but only to point out that Eumenes pursued a careful and shrewd policy of cultivating all three of his brothers, in order that in any eventuality any one of them would be prepared to assume the duties of ruler. In short, the idea that Eumenes would have intentionally represented himself and Attalus in the virtually indistinguishable guise of recognizable divinities is contrary to everything known about both the character of Eumenes and style the of his kingship. As Polybius specifically states (32.8.6), “Having three brothers who were grown and active men, he (Eumenes) kept them all loyal to himself, serving both as guardians of his personal safety and protectors of the integrity of his throne; and this is a thing one can discover rarely in history” (my translation).

²⁵ “The Premature Deification of Eumenes II,” *CP* 1 (1906), pp. 231–34.

Stratonike who is normally honored together with the King in such dedications.²⁶

Ferguson explained these unprecedented anomalies as the result of a rather bizarre historical incident which occurred in 172. According to Livy (following Polybius), in 172 Eumenes made a special journey to Rome in order to warn the Senate that Perseus was secretly preparing for war. On his return, as he climbed the steep path from Cirrha to visit the oracle at Delphi, he was ambushed by assassins. Alive but suffering from a severe head wound, the King was carried away amid tight security to the island of Aegina (at that time an Attalid possession) where he convalesced in secret. Naturally, the report spread that Eumenes was dead; and at Pergamum, Attalus, who was acting chief of state, erroneously accepted these reports, declared himself King, and proceeded to marry Eumenes' wife Stratonike. When it was subsequently learned that Eumenes was in fact not dead, the chagrined Attalus abdicated, divorced Stratonike, and begged his brother's forgiveness for his overly hasty actions. Although the crisis was resolved amicably, it must be admitted that Eumenes apparently procrastinated about acknowledging a child (the future Attalus III) who was subsequently born to the previously childless Stratonike.²⁷

Ferguson held that the extraordinary titles of the Thracian dedication fit perfectly into this confused period of Attalus II's unintentional usurpation, when it would have been quite natural for the would-be King to have proclaimed his supposedly dead brother "Philadelphos" and "Theos" and for there to have been a discreet omission of Stratonike as Eumenes' wife. Furthermore, the lack of similar dedications also fits this situation since after Eumenes' return the embarrassing titles would have been immediately dropped.

²⁶ Although Ferguson's article has been generally ignored, the anomalies he identified in the Thracian dedication still hold: e.g. Hansen, *Attalids*, p. 455: "Unlike the Ptolemies and the Seleucids, no Attalid was called *theos* until after his death"; also the title "Philadelphos" remains exclusively Attalus II's, although there is now some evidence that the title was posthumously applied to Eumenes and Attalus together by Attalus III (see Hansen, pp. 142–43).

²⁷ Livy 42.15–16; cf. Diod. 29.34; Plut. *Mor.* 184B, 489F; Appian, *Mac.* 11.4; *SIG*³ 643, ll. 29–34. On the birth and recognition of Attalus III, see Hansen, *Attalids*, pp. 142, 471–74, though she personally finds the evidence hard to accept.

Accepting the numismatic evidence which points to the portrait tetradrachm having been struck between roughly 180–160, Ferguson's interpretation provides exactly the right context for explaining this unparalleled, unprecedented, and puzzling numismatic tribute. The historical occasion could well have been the extraordinary incident of 172 and Attalus II, not Eumenes, responsible for its emission. For in truth, what do we really see on the reverse of this coin—simply a careless rendition of the heavenly twins, Kastor and Polydeukes? Isn't the real and indeed all too obvious intention to portray Eumenes, standing at the right, boldly projecting the immortal greatness of his reign (so "Theos"), and Attalus, ever the trusted and loyal brother, adopting a noticeably deferential pose with head turned admiringly toward his supposedly fallen "twin" in a "divine" show of reverence and brotherly love ("Philadelphia")?

I submit that the portrait tetradrachm of Eumenes II derives from Attalus II's overly hasty efforts to establish himself as Eumenes' legitimate successor during the crisis of 172: that it was designed for maximum propaganda value (hence the unprecedented iconography identifying Eumenes and Attalus as incarnations of heavenly twins, the Kabeiroi-Dioskouroi), produced in the latest style (hence the wreathed border of the reverse), struck under the already existing authority of the official Philetaerus coinage (hence the connection of mint mark, symbol, and weight standard), and quickly withdrawn in shocked embarrassment (hence the survival of only a single example). If this reconstruction is correct, the unique portrait tetradrachm of Eumenes II can no longer be viewed as simply another example from the long series of hellenistic coin portraits produced by rulers in their *own* honor but rather a revealing fragment of historical evidence for what Ferguson so fittingly called "the premature deification of Eumenes II."

ADDENDUM

After this article was in press (and after 134 years!), a second example of the Eumenes portrait issue appeared in commerce (see Bank Leu, May 1983). Both the dies and the controls (stylis to l. with AP in exergue) are new; and although the stance and attitude of the reverse

figures are identical to the BM example, stars have been added above the heads, thus removing any ambiguity about their association with the Kabeiroi-Dioskouroi.

KEY TO PLATES

1. Pergamum, Athena Nikephoros tetradrachm, Copenhagen (Courtesy of Otto Mørkholm).
2. Pergamum, portrait tetradrachm of Eumenes II, 15.23, British Museum.
3. Erythrae, posthumous Alexander tetradrachm, 16.04, ANS.
4. Pergamum, Cistophoric tetradrachm, 12.69, ANS (Asia Minor 1962 Hoard, no. 36; Kleiner-Noe, *ECC*, Perg. 54-h).
5. Pergamum, Philetaerus tetradrachm, 16.35, Berlin (Babylon 1900 Hoard; Westermarck, VIB, obv. 129).
6. Pontus, tetradrachm of Mithradates IV (170–150) and Laodice, 17.05, Paris.
7. Syros, wreathed tetradrachm, Sternberg, 24 Nov. 1977, 103, 16.74.
8. Pergamum, Eumenes portrait tetradrachm reverse enlarged 4:1.
9. Bactria, drachm of Eucratides (ca. 171–156/5), enlarged 2:1 (author's photo file; provenance unknown).
10. Syria, tetradrachm of the "Sacred and Autonomous Tripoleis," 15.09, Sotheby, 28 Mar. 1896 (Montagu), 744.
11. Bactria, tetradrachm of Eucratides, ANS.
12. Syria, tetradrachm of Antiochus VI (145–142/1), ANS.

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HELLENISTIC COINS OF AEGEAE (CILICIA)

(PLATES 17-22)

HANSJÖRG BLOESCH

To Edoardo Levante

During the few years which have passed since "Tetradrachms of Aegeae" was written¹ more hellenistic bronze coins have come to light. Well preserved ones have allowed the correcting or replacing of misread monograms, and in some cases have even changed the sequence of issues. Taking into consideration not only the large bronzes with head of the City and horse's head ("units") but also the smaller and numerically rarer coins ("two-thirds," "thirds"), the picture of hellenistic coinage at Aegeae becomes much clearer and, of course, more substantial. The nucleus of the earlier article, the four tetradrachms, will be mentioned only so far as is necessary to complete this survey.

Aegeae was probably founded by a body of Macedonians in the early third century B.C. The locality lay on the spur of a small hill by the sea and was provided with a good natural harbor. The area formed part of the kingdom of the Seleucids who may have wanted to strengthen

¹ H. Bloesch, "Tetradrachms of Aegeae (Cilicia)," in *Essays Thompson*, pp. 1-7, pl. 1 (hereafter cited as Bloesch, "Tetradrachms").

I wish to express my gratitude to the curators of museums and collections as well as to the private collectors with whose treasures I was freely allowed to work. My warmest thanks go to Otto Mørkholm for discussing this paper with me, especially the difficulty of dating the tetradrachms. The late C. Kraay supplied casts and gave me information on the Oxford coins. Alan Walker kindly improved the English of my manuscript.

their strategic position on the southern shore of the fertile plain of Cilicia. During the reign of Antiochus IV (175–164 B.C.) Aegeae, like many other cities in the kingdom, issued a municipal coinage.² There is only one group of earlier coins known which was struck in her name, the bulk of the material coming from the later second and the early first century when the town must have been quite prosperous.

In 83 B.C. King Tigranes of Armenia conquered Cilicia and, a few years later, forced the inhabitants of twelve Cilician cities, among them Aegeae, to move to his new capital Tigranocerta. For about eight years the Cilicians had to stay there, and only after the defeat of Tigranes in 69 B.C. did they return to their own country. By this time piracy spreading out from southern Asia Minor had become so unbearable that in 67 B.C. the Roman Senate decided to send out Pompey the Great endowed with full power and a mighty fleet in order to get rid of the plague. Pompey fulfilled his task within a few months and reorganized Cilician affairs. Tarcondimotus, chieftain of a mountain people originating from the Amanus valleys, was confirmed in his territory which lay in the area of Hierapolis, to the north of Aegeae. Later Tarcondimotus supported Pompey in the war against Caesar with a considerable fleet which may have been built up in the harbor of Aegeae. The war ended fatally for both Tarcondimotus and Pompey. It was Caesar who in 47 B.C., during his stay at Tarsus, reorganized Cilicia. Aegeae showed herself pro-Caesarian and gave evidence of her loyalty with the beginning of the town's well-known era in the same year.

Returning to the second century B.C., from the sequence of coins as put forward in this article it follows that toward the end of the century Aegeae was allowed to declare herself *asylus* and autonomous like many cities in this part of the world. When she adopted the title "autonomous," she certainly would also have, like other cities, begun her (first) era. The question, when this actually may have happened, will be briefly discussed later in this article.

In the catalogue which follows, illustrated coins are marked with an asterisk. Most die links and axes are given in Table 1. After this article

² See O. Morkholm, "The Municipal Coinages with Portrait of Antiochus IV of Syria," *Congresso internazionale di numismatica, 1961*, vol. 2, *Atti* (Rome, 1965), pp. 63–67, pl. 5.

went to press, notes concerning four more coins came to light. These have been incorporated into the catalogue as 96a, 162a, 245a, and 279a. Additional information is included in the catalogue citation, as these coins are not included in the accompanying tables which could not be modified.

CATALOGUE

PERIOD 1. Late third/early second century B.C.

Bronze "units"

Obv. Head of Athena r.; dotted border.

Rev. ΑΙΓΕΑΙΩΝ; goat standing l.; dotted border.

1. 7.51 g 18.7 mm Oxford
2. 7.08 g Berlin 51/1969. Cast kindly supplied by H.-D. Schultz
3. 6.05 g 19.2 mm Oxford
- *4. 5.99 g 18.8 mm ANS. Ex Newell
5. 5.13 g 18.2 mm London. *BMCLycaonia* 13
6. 8.58 g 20.4 mm 1977 Nomos, Kriens
7. 6.79 g 19.0 mm 1978 Hanscotte. Horns of goat pointing forward instead of backward, retouched?

Bronze "two-thirds"

Obv. Same type.

Rev. Same type and inscription.

- *8. 4.52 g 16.4 mm ANS

PERIOD 2. Under Antiochus IV, 175–164 B.C.

Bronze "units"

Obv. Head of Antiochus IV r., with taenia; dotted border.

Rev. ΑΙΓΕΑΙΩΝ (9–10; 12–14) or ΑΙΓΕΑΙΩΝ (11); horse's head l.; dotted border.

9. 6.73 g 20.1 mm Winterthur 6431. Ex Hanscotte

10. Adana. D. H. Cox, *A Tarsus Coin Collection in the Adana Museum*, ANSNM 92 (1941), no. 68, pl. 3 (hereafter cited as Cox)
- *11. 7.48 g 22.5 mm Levante
Rev. to l. N
12. 5.99 g 20.5 mm Paris 70. Large die flaw. *KlMünz* 2, p. 423, no. 1, pl. 16, no. 7
Rev. to r. ⬤
13. 8.21 g 20.4 mm Levante
 14. 7.20 g 21.9 mm ANS

Bronze "thirds"

Obv. Head of Antiochus IV r., with taenia; dotted border.

Rev. — ΑΙΓΕΑΙΩΝ club; dotted border.

15. 3.30 g 13.2 mm London 1979 1-1-958. *SNGvAulock* 8664
 16. 2.48 g 13.0 mm Levante
 17. 2.91 g 11.3 mm London 1977 1-16-1
 *18. 2.26 g 11.9 mm Oxford

Rev. below H

19. 1.74 g 12.3 mm Paris. 1961 ex Seyrig. Compare Mionnet, *Suppl.* 7, p. 154, no. 19

PERIOD 3. Ca. 160-130/120 B.C.

Bronze "units"

Obv. Turreted head of City, between turrets crown of the head (20-46) or "city walls" with small dot (47-58) indicating the battlements on the opposite side, or without dot (59-61); at ear and on neck, curls; dotted border.

Rev. ΑΙΓΕΑΙΩΝ (20-58, sometimes Λ instead of Α) or ΑΙΓΕΑΙΩΝ (59-61); horse's head l.; no border.

Rev. to r. M

20. 6.43 g 20.0 mm Paris 49^s (old no. 133). The monogram lost its horizontal bar either when the piece was coined, or by oxidation, or during the cleaning process

21. Antakya, Hatay Museum. Only rev. seen
22. 6.17 g 19.5 mm Paris 53. *Waddington* 4065
- *23. 6.54 g 19.6 mm Levante
24. 6.12 g 20.2 mm Winterthur 4523. Gift E. Levante
25. 5.57 g 19.6 mm Berlin. 1906 ex Löbbbecke
- Rev.* to r. ⌘
- *26. 9.10 g 22.0 mm Winterthur 6466
27. 5.88 g 19.6 mm Levante
- Rev.* to r. †
28. 7.65 g 19.5 mm Levante
29. 6.87 g 19.5 mm Oxford. J. G. Milne, "Notes on the Oxford Collections," *NC* 1940 (hereafter cited as Milne, *NC* 1940) p. 239, no. 2b; weight given differs slightly from the correct one, as often in this article
30. 5.71 g 19.9 mm Berlin. 1928 ex Imhoof and O. Bernhard
31. 5.41 g 19.4 mm Oxford. Milne, *NC* 1940, p. 239, no. 2a
- Rev.* to r. ⌘
32. 5.92 g *SNGvAulock* 5442
33. 6.31 g 20.1 mm Lindgren
- *34. 5.51 g 19.4 mm Levante. Cmk: Macedonian helmet
35. 5.54 g 20.2 mm Levante
36. 5.67 g 20.5 mm Paris 54. Mionnet 3, p. 539, no. 8
37. 5.48 g 19.5 mm Munich
- Rev.* to r. ⌘
38. 6.63 g *SNGvAulock* 8663
- *39. 6.91 g 20.8 mm Levante
40. 6.20 g 20.4 mm London. *BMCLycaonia* 1
41. 6.55 g 20.0 mm Paris 1971-371
42. 7.00 g 22.0 mm 1900 Berlin. Ex Imhoof
43. 6.18 g 21.0 mm Winterthur 4521. Gift E. Levante
44. 6.01 g 20.7 mm Winterthur 4522. Gift E. Levante
45. 6.33 g 20.5 mm New Haven, Yale University
46. 8.33 g 21.8 mm Oxford
- Rev.* to r. ⌘
- *47. 6.01 g 21.0 mm Levante. Bloesch, "Tetradrachms," pl. 1, no. 5

48. 6.20 g 19.7 mm Bologna
 49. 6.68 g 19.9 mm Munich
 50. Antakya, Hatay Museum. Only rev. seen

Rev. to l. ⚔

51. 6.42 g 20.7 mm Levante
 52. 6.70 g 20.7 mm New Haven, Yale University. Cmk: bridled horse's head r.
 53. 6.07 g 20.9 mm Vienna 19039
 54. 5.75 g 20.0 mm Oxford. Milne, *NC* 1940, p. 238, no. 1b
 55. 6.95 g 20.6 mm Oxford. Milne, *NC* 1940, p. 238. no. 1a
 56. 7.04 g 20.7 mm Cambridge, Leake. *Obv.* may be from the same die as 55

Rev. to r. ⚔

- *57. 7.55 g 20.3 mm Copenhagen. *SNGLycaonia* 28
 58. 5.12 g 20.4 mm Vienna 36740

Rev. to r. ⚔

59. 6.16 g 19.9 mm Levante
 60. 6.99 g 20.0 mm Winterthur 6234
 61. 6.94 g 19.8 mm Winterthur 4524. Gift E. Levante

Bronze "two-thirds"

Obv. Head of Athena r.; dotted border.

Rev. ΑΙΓΕΑΙΩΝ; goat standing l.; dotted border.

Rev. to l. Μ

62. Antakya, Hatay Museum. Only rev. seen, horizontal bar of monogram overlooked in dim light of show case?

Rev. to l. ⚔

63. 4.18 g 16.8 mm Lindgren
 *64. 4.59 g 17.3 mm Paris 59. Mionnet 3, p. 540, no. 12

Rev. to l. ⚔

65. 4.24 g 16.4 mm Oxford. *Rev.* die of 64, with recut monogram

Rev. to l. ⚔

66. 7.32 g 19.0 mm Athens 3

Rev. to l. ♂

*67. 4.01 g 15.7 mm Levante

Rev. to l. ♂

68. 4.86 g 17.8 mm ANS. Ex Newell

69. 4.98 g 18.3 mm Paris 58. Mionnet 3, p. 540, no. 13

70. 4.03 g 17.6 mm Levante

Rev. to l. ♂

*71. 3.84 g 17.8 mm Levante

Rev. to l. ♂

72. 5.91 g 17.9 mm Vienna 36335. Egger 46, May 11, 1914
(Prowe), 2145 (part)

Bronze "thirds"

Obv. Wreathed head of Herakles r.; dotted border.

Rev. ΑΙΓΕ ΑΙΩΝ (instead of Α often Δ); club with taenia;
no border.

Rev. to r. ♂

73. 3.98 g Glasgow. *Hunter* 2, p. 526, no. 6

Rev. to l. ♂

74. 3.33 g 14.5 mm Levante

*75. 2.86 g 14.9 mm Oxford

Rev. to r. ♂

*76. 2.33 g 15.4 mm Levante

77. 3.95 g 16.6 mm London

Rev. to r. ♂

78. 3.95 g 16.8 mm Levante

79. 4.07 g *SNGvAulock* 8861

80. 4.13 g 16.2 mm Paris. Ex Delepierre

Bronze "sixth"

Obv. Head of Herakles r.; dotted border.

Rev. ΑΙΓΕ / ΑΙΩΝ; tripod; dotted border.

Rev. above, monogram?

*81. 1.13 g 11.8 mm Berlin. 1873 ex Fox

PERIOD 4. Ca. 130/120–83(77?) B.C.

A. Bronze coins with *Aigeaion**Bronze “units”*

Obv. Head of City r., turreted and veiled; dotted border.

Rev. ΑΙΓΕΑΙΩΝ (Α, Α, and Λ); half horse l.; apparently no border.

Rev. to r. ⚧

- | | | | |
|------|--------|-------------------|---|
| 82. | 8.19 g | 21.8 mm | Paris 52. <i>Waddington</i> 4060 |
| 83. | 7.23 g | 21.6 mm | London. 1901 ex Ready |
| 84. | 7.13 g | Glasgow. | <i>Hunter</i> 2, p. 526, no. 2 |
| 85. | 6.40 g | 20.1 mm | Berlin. 1906 ex Löbbecke |
| 86. | 5.81 g | 21.2 mm | Berlin. 1900 ex Imhoof |
| *87. | 5.28 g | 20.8 mm | Levante |
| 88. | 4.56 g | 20.3 mm | 1979 Leu. Ex J. Hirsch |
| 89. | 4.47 g | 20.3 mm | 1980 Leu |
| 90. | Adana. | Cox no. 69, pl. 3 | |
| 91. | 7.25 g | 21.8 mm | ANS. Ex Newell |
| 92. | 7.89 g | 21.2 mm | Oxford. Milne, <i>NC</i> 1940, p. 239, no. 4a |
| 93. | 7.77 g | | <i>SNGvAulock</i> 5441 |
| 94. | 7.04 g | 23.7 mm | Winterthur 4526. Gift E. Levante |
| *95. | 6.10 g | 21.4 mm | Winterthur 6259. Bloesch, “Tetradrachms,”
pl. 1, no. 6 |
| 96. | 6.05 g | 21.0 mm | New Haven, Yale University |
| 96a. | 6.70 g | | Gotha. Same axis as 96 |
| 97. | 5.24 g | 21.2 mm | Vienna 19038 |
| 98. | 4.63 g | 19.4 mm | Milan 2967 |
| 99. | 4.65 g | 19.3 mm | Oxford. Milne, <i>NC</i> 1940, p. 230, no. 4b |

Bronze “two-thirds”

Obv. Head of Athena r.; dotted border.

Rev. ΑΙΓΕΑΙΩΝ; goat lying l.

Rev. above ⚧

- | | | | |
|-------|--------|---------|----------------------------------|
| 100. | 5.10 g | 19.5 mm | Winterthur 4525. Gift E. Levante |
| *101. | 3.73 g | 18.5 mm | Levante |

Bronze "third"

Obv. Wreathed head of Herakles r.

Rev. ΑΙΓΕΑΙΩΝ; club and bow in case.

Rev. to l., Ⲑ

*102. 3.69 g 15.0 mm Levante

B. Bronze coins with *Aigeion tes ieras kai asylou**Bronze "units"*

Obv. Head of City r., turreted and veiled; dotted border.

Rev. ΑΙΓΕΑΙΩΝ / ΤΗΣΙΕΡΑΣ / ΚΑΙΑΣΥΛΟΥ (A and Δ may occur on the same coin); horse's head l.

Rev. to r. Δ

103. 8.93 g 22.9 mm London. *BMCLycaonia* 9

*104. 7.44 g 21.0 mm 1964 Paris (R 3859)

105. 5.67 g 20.8 mm Cambridge. *McClean* 9046 (not illustrated; monogram and title clearly legible, not "apparently")

106. 6.25 g 21.5 mm Oxford

107. 5.75 g 21.4 mm Levante

Bronze "two-thirds"

Obv. Head of Athena r.; dotted border.

Rev. ΑΙΓΕΑΙΩΝ / ΤΗΣΙΕΡΑΕ / ΚΑΙΑΣΥΛΟΥ; goat lying l.; no border.

Rev. to r., Δ

*108. 4.80 g 19.3 mm Levante

C. Silver coins with *Aigeion*Bronze coins with *Aigeion tes ieras kai autonou**Tetradrachms*

Obv. Head of City r., turreted and veiled; fillet border.

Rev. ΑΙΓΕΑΙΩΝ (109, 111–112) or ΑΙΓΕΑΙΩΝ (110); Athena with spear and shield to l., holding Nike upon her

r. hand; wreath border. For fuller discussion see Bloesch, "Tetradrachms," and below. The dates may refer to an era beginning in the late second century, probably ca. 105/4 B.C.

Obv. earring pendant: cluster of grapes

Rev. to l. ⚙ club and E; in exergue Δ (year 4)

- *109. 14.24 g 27.8 mm Winterthur 4511. Bloesch, "Tetradrachms," pl. 1, nos. 1 and 1a

Rev. to l. ΔI and club; to r. Δ; in exergue IΓ (year 13)

- *110. 13.86 g 28.6 mm Berlin 644/1903. Bloesch, "Tetradrachms," pl. 1, no. 2

Obv. earring pendant: disc-and-hook

Rev. as 110, but in exergue IΓ (year 16)

- *111. 14.16 g 26.3 mm Levante. Bloesch, "Tetradrachms," pl. 1, no. 3

Rev. as 110, but in exergue IH (year 18)

112. 14.24 g 25.0 mm ANS. Bloesch, "Tetradrachms," pl. 1, no. 4

Bronze "units"

Obv. Head of City r., turreted and veiled; dotted border.

Rev. ΑΓΕΑΙΩΝ / ΘΗΣΙΕΡΑΣ / ΚΑΙ / ΑΥΤΟΝΟΜΟΥ (Α, Α, and Α); horse's head; no border.

Obv. earring pendant: cluster of grapes

Rev. to r. ⚙

- *113. 6.92 g 21.4 mm Paris. Ex Delepierre

114. 7.32 g 21.7 mm ANS. Ex Newell. Bloesch, "Tetradrachms," pl. 1, no. 8

115. 7.88 g 20.9 mm Berlin. 1906 ex Löbbecke

116. 7.59 g 21.2 mm Berlin 28814




117. 6.96 g 21.6 mm Paris 49. *Waddington* 4061

118. 5.93 g 20.2 mm Milan 3560

Obv. earring pendant: elongated (grapes?) faintly visible

Rev. to r. ⚙

119. 5.04 g 20.1 mm Oxford

- *120. 4.70 g 19.6 mm Levante
 121. 4.39 g 21.0 mm Vienna 35682. Ex Miller zu Aichholz
 122. 5.86 g 21.3 mm London. *BMCLycaonia* 5. Bloesch, "Tetradrachms," pl. 1, no. 7
- Obv.* earring pendant: dot and cone-shaped ornament
Rev. to r. 
123. 7.65 g 22.5 mm Paris 51
 124. 7.59 g 21.7 mm Paris 1971-363
 *125. 6.10 g 20.8 mm New Haven, Yale University
 126. 4.68 g 20.7 mm Winterthur 6266
- Rev.* to r. 
127. 7.32 g Weber 7496
 *128. 6.58 g 22.8 mm London. *BMCLycaonia* 4. Bloesch, "Tetradrachms," pl. 1, no. 9
 129. Ex Leake, electrotype in Cambridge, Fitzwilliam Museum
 130. 5.94 g 20.2 mm Oxford
 131. 5.57 g 22.4 mm Paris 47
 132. 7.19 g 23.0 mm Levante
 133. Adana. Cox, no. 70, pl. 3. Cmk: bearded head r. ("Herakles")
 134. 4.93 g 21.6 mm Paris. Ex Gaudin. Monogram faintly visible
- Obv.* earring pendant: hook-shaped with curls below
Rev. to r. 
135. 7.57 g 22.5 mm Ex Levante
 *136. 6.15 g 22.4 mm Levante
 137. 5.41 g 21.8 mm Levante. Cmk: bearded head r. Bloesch, "Tetradrachms," pl. 1, no. 10
 138. 6.63 g 21.4 mm Beirut 5386. Ex Seyrig. Maurice Chéhab, *Monnaies gréco-romaines et phéniciennes du Musée National, Beyrouth, Liban* (Paris, 1977), p. 15, no. 5386, pl. 8, no. 1
 139. 5.54 g 21.2 mm Levante
 140. 5.53 g 21.3 mm Copenhagen. Gift E. Levante
 141. 4.54 g 21.6 mm Winterthur 4529. Gift E. Levante
 142. 5.83 g 21.9 mm Cambridge. *McClean* 9045, pl. 325, 9
 143. Ratto, April 4, 1927, 2294
 144. 7.53 g 23.2 mm Munich
 145. 7.39 g 24.7 mm London. *BMCLycaonia* 3

- *146. 6.85 g 22.1 mm Berlin. Cmks: head of City r.; bearded head r. 1900 ex Imhoof
147. 5.58 g 22.0 mm Vienna 19040
148. 5.40 g Glasgow. *Hunter* 2, p. 526, 4
149. 4.89 g 20.3 mm Berlin. 1906 ex Löbbecke
150. 6.49 g 22.8 mm Oxford. Double struck
- *151. 7.74 g 22.5 mm Paris 48. *Waddington* 4063
152. 6.25 g 21.9 mm London. *BMCLycaonia* 2
- Obv.* earring pendant: hook-shaped
- Rev.* to r. ☐
- *153. 6.96 g 21.2 mm Winterthur 4528. Bloesch, "Tetradrachms," pl. 1, 11
154. 5.90 g *SNGvAulock* 5445
155. Agora Ltd., May 14, 1974, 15
156. 5.59 g 21.0 mm Levante
- Rev.* to r. ☐
- *157. 6.04 g 21.3 mm Paris 49³ (old no. 131). Ex Bissen, 1912 ex Athens
158. 5.34 g 22.0 mm Paris 49⁴ (old no. 132). Cmk: beardless head r.
- Obv.* neither ornament nor curls below ear.
- Rev.* to r. ☐
- *159. 9.73 g 22.6 mm Copenhagen. *SNGLycaonia* 29. *Obv.* die flaw at veil, as nos. 160–61. Cmk: eagle — one of Tigranes' countermarks? Compare his tiara and D. H. Cox, "The Coins," in *Tarsus* 1, ed. H. Goldman (Princeton, 1950), pp. 55 and 59 (hereafter cited as *Tarsus* 1)
160. 7.77 g 22.0 mm Paris 50. Cmk: bearded head r. *Waddington* 4064
161. 5.26 g 21.7 mm Levante
162. 8.25 g 22.5 mm Vienna 19041. *Rev.* monogram without horizontal bar. Cmk: bearded head r.
- 162a. 5.51 g J. Schulman FPL 222, Mar. 1982, 3160. *Obv.* = 162 = 163; *rev.* as 162. Same die axis as 162 and 163.
- *163. 6.02 g 21.8 mm ANS

Obv. below ear, curls

Rev. to r. $\overline{\text{M}}$

*164. 6.34 g 19.3 mm Copenhagen. Gift E. Levante

Rev. to r. $\overline{\text{M}}$

165. 6.15 g 19.8 mm Bologna

Rev. to r. $\overline{\text{AP}}$

*166. 6.89 g 20.4 mm Berlin

Obv. earring pendant: hook-shaped; below curls

Rev. to r. E ?

*167. 6.50 g 20.0 mm Levante.³

168. 6.50 g 20.4 mm London. *BMCLycaonia* 6

Obv. below ear, curls

Rev. to r. $\overline{\text{EK}}$

169. 8.14 g 19.8 mm ANS

*170. 7.22 g Glasgow. *Hunter* 2, p. 526, no. 3

171. 6.98 g 19.4 mm Oxford. Milne, *NC* 1940, p. 239, no. 5

172. 6.92 g 19.8 mm Winterthur 6253. Bloesch, "Tetradrachms,"
pl. 1, no. 12

Bronze "two-thirds"

Obv. Head of Athena r.; dotted border.

Rev. ΑΙΓΕΑΙΩΝ / ΤΗΣΙΕΡΑΣ / ΚΑΙ / ΑΥΤΟΝΟΜΟΥ
(178: Δ); goat lying l.; no border.

Rev. above goat $\hat{\text{A}}$

*173. 3.93 g 19.3 mm Levante

174. 3.22 g 18.0 mm Berlin 28722

175. 4.24 g 18.2 mm London. Spink, July 1920, 28 (Weber), 9
= *Weber* 7495

176. 5.66 g 18.8 mm Cambridge. *SNGFitz* 5222 (Leake)

177. 2.45 g 18.0 mm London 1979 1-1-959. *SNGvAulock* 5446

³ The general shape of the head and the rather high relief of this specimen may be compared with H. v. Aulock, "Die Münzprägung der kilikischen Stadt Mopsos," *AA* 1963, p. 242, fig. 1, no. 20. Compare also *SNGvAulock* 5732.

Rev. above goat ⚔

*178. 4.02 g 19.0 mm Levante

Rev. above goat ⚔

179. 4.33 g 18.8 mm Copenhagen

180. 3.55 g 18.4 mm Paris 56

Rev. monogram above goat illegible

181. 5.06 g 19.0 mm Oxford

Rev. above goat ⚔

*182. 3.25 g 17.9 mm Levante

183. Adana. Cox, no. 73, pl. 3

Rev. above goat ⚔

184. 5.18 g 17.7 mm Vienna 19035

185. 4.70 g 15.3 mm Bologna

Rev. above goat KA

*186. 6.09 g 19.2 mm Levante

187. 3.67 g 18.0 mm Oxford

Rev. above goat ⚔

*188. 3.51 g 16.8 mm Berlin. 1900 ex Imhoof

Rev. above goat E

*189. 4.37 g 16.2 mm ANS

Bronze "thirds"

Obv. Head of Herakles r., with taenia; dotted border.

Rev. ΑΙΓΕΑΙΩΝ / ΤΗΣΙΕΡΑΣ / ΚΑΙΑΥΤΟΝΟΜΟΥ (Λ : 198–200); club and bow in case; no border.

Rev. to l. ⚔

*190. 2.14 g 15.2 mm Copenhagen. *SNGLycaonia* 30

Rev. to l. ⚔

191. 3.12 g 16.3 mm Vienna 36334. Egger 46, May 11, 1914 (Prowe), 2145 (part)

192. 2.89 g 15.8 mm Paris 63

*193. 2.64 g 16.1 mm Winterthur 6286

Rev. to r. P^{P}

- *194. 2.32 g 15.7 mm London. *BMCLycaonia* 11
 195. 1.84 g 14.8 mm Winterthur. Gift E. Levante

Rev. to r. P^{P}

196. 2.08 g 16.3 mm Levante
 197. 2.04 g 16.9 mm Oxford. Milne, *NC* 1940, p. 239, no. 7

Rev. to r. P^{P}

198. 2.42 g 15.3 mm London. *BMCLycaonia* 10
 *199. 2.27 g 15.8 mm Levante
 200. Adana. Cox, no. 71, pl. 3

Rev. to r. P^{P}

201. Sestini, *Descriz. delle Med. ant. gr. del Museo Hedervariano* 2 (1828), p. 275, no. 4, pl. 22, no. 13. Mionnet, *Suppl.* 7, p. 153, no. 15

Rev. to r. KA

202. 2.76 g 15.7 mm Athens
 203. 2.71 g 15.5 mm Oxford. Milne, *NC* 1940, p. 239, no. 8

Tigranes in eastern Cilicia (from 83 B.C.)

Exiled inhabitants of Cilician cities in Tigranocerta (77–69 B.C.)

No coins from ca. 83/77 to ca. 60/50 B.C.

PERIOD 5. Ca. 60/50–47 B.C.

Bronze “units”

Obv. Head of City r., turreted and veiled.

Rev. Ethnic; horse’s head l.; no border.

Rev. ΑΙΓΕΑΙΩΝ / ΘΗΣΙΕΡΑΣ / ΚΑΙ / ΑΥΤΟΝΟΜΟΥ; to r. ΔΗ

- *204. 5.10 g 18.3 mm Paris. Ex Gaudin

Rev. ΑΙΓΕΑΙΩΝ / ΘΗΣΙΕΡΑΣ / ΚΑΙ / ΑΥΤΟΝΟΜΟΥ; to r. Δ ?

- *205. H. M. F. Schulman, June 1969 (Mabbott), 2105 (ANS cast)

Rev. as 205, but to r. ΣΔ

206. 5.28 g Glasgow. Alphas with broken bar. *Hunter* 2, p. 526, no. 5 (the late form of omega read by MacDonald is certainly not there)

Rev. as 205, but to r. ΕΜ

- *207. 5.91 g 20.7 mm London. *BMCLycaonia* 7

Rev. as 205, but to r. IE

*208. 5.03 g 19.8 mm Winterthur 4531

Bronze "two-thirds"

Obv. Head of Athena r.; dotted border.

Rev. Ethnic, goat lying l.; no border.

Rev. . . . HΣIEPA . . .; above goat ΔH

*209. 4.15 g Ex B. Pozzi; cast in Winterthur

Rev. $\text{ΛΙΓΕΑΙΩΝ} / \text{ΤΗΣΙΕΡΑΣ} / \text{ΚΑΙ} / \text{ΛΥΤΟΝΟΜΟΥ}$; above goat ΛΥ

*210. 3.10 g 16.4 mm Levante

Bronze "thirds"

Obv. Head of Heracles r., with taenia; dotted border.

Rev. Ethnic, club and bow in case.

Rev. $\text{ΑΙΓΕΑΙΩΝ} / \text{ΤΗΣΙΕΡΑΣ} / \text{ΚΑΙΑΥΤΟΝΟΜΟΥ}$; letters or monogram to l. off flan

211. 2.44 g 14.7 mm Paris 62

Rev. $\text{ΑΙΓΕΑΙΩΝ} / \text{ΤΗCΙΕΡΑC} / \text{ΚΑΙΑΥΤΟΝΟΜΟΥ}$; to r. Σ !. Second letter or monogram partly off flan

*212. 2.29 g 13.6 mm Copenhagen. *SNGLycaonia* 31

PERIOD 6. 47/6–27(?) B.C.

A. Regular Issues

Bronze "units"

Obv. Head of Zeus r.; dotted border.

Rev. ΑΙΓΕΑΙΩΝ ; Athena with spear and shield to l., holding Nike upon her r. hand; no border.

Rev. to l. ΛΥ (much corroded)

213. 7.74 g 23.1 mm ANS. Bars of alphas missing

214. 7.24 g 21.7 mm Levante

215. 7.53 g 22.6 mm Paris 66. Alphas with dot

*216. 5.63 g 21.8 mm Winterthur 6384. Alpha with dot; initial alpha off flan

217. 5.31 g 21.2 mm ANS. Dot of initial alpha corroded; second alpha missing. Ex Newell
218. 5.62 g 22.6 mm Oxford. Much worn
- Rev.* to l. α
- *219. 6.48 g 21.6 mm Levante. Alphas with broken bars
- Rev.* to l. Δ H
- *220. 8.73 g 21.2 mm Winterthur 6403
221. 4.26 g 20.3 mm Berlin. 1900 ex Imhoof
- Rev.* to l. EP
222. 7.01 g 21.7 mm Copenhagen. Gift E. Levante
223. 6.17 g *SNGvAulock* 8662
224. 6.62 g 20.8 mm Paris 49¹ (old no. 129). Mionnet 3, p. 540, no. 17
225. 6.05 g 21.7 mm Mme Réna Ch. Evelpides, Athens
226. 5.83 g 20.1 mm Paris 64
227. 7.52 g 22.2 mm London. *BMCLycaonia* 12
- *228. 7.71 g 21.5 mm Munich
229. 6.73 g 21.0 mm ANS
230. 7.49 g 22.0 mm Winterthur 6503. Gift E. Levante
231. 6.38 g 22.2 mm Levante
232. 6.81 g 22.8 mm Cambridge, Leake

Bronze "two-thirds"

- Obv.* Head of Alexander, with taenia; dotted border (233–39); apparently without border (240–42).
- Rev.* Ethnic, Nike l., with palm branch, holding a wreath in her r. hand.
- Rev.* to r. ΑΙΓΕΑΙΩΝ; to l. α
- *233. 4.05 g 18.9 mm Lindgren
- Rev.* as 233, but to l. Δ H
234. 4.91 g ca. 19 mm Ex Levante. Known only from a photograph of a cast. Stylistically very similar to the last coin
- Rev.* to l. ΑΙΓΕ / ΑΙΩΝ; to r. ΑΠΤΕ
- *235. 3.19 g 16.0 mm Levante
- Rev.* as 235, but to l. Δ N
- *236. 2.88 g 17.3 mm London (ΑΓΕ / ΑΙΩΝ)

- Rev.* as 235, but to l. NH
237. 3.23 g 16.8 mm Levante
238. A. G. Malloy 29, Aug.-Sept. 1972, 517
- Rev.* to l. vertically, A IΓE / AIΩN; to r. AN; immediately below these two letters T (year 10, 38/7 B.C.)
- *239. 4.82 g 18.7 mm London. *BMCLycaonia* 19. Legend discernible only on original; r. arm of Nike between first and second letter of ethnic
- Rev.* to r. A IΓE AIΩN; to l. ΣΩ
- *240. 4.38 g 19.0 mm Berlin 1873
241. 4.11 g 16.8 mm Levante. *SNGvAulock* 5443
242. 2.70 g 18.1 mm Paris 69. Mionnet, *Suppl.* 7, p. 154, no. 17. *KlMünz* 2, p. 424, no. 4, pl. 16, no. 8 (obv. only)
- Rev.* to r. A IΓE A IΩN; to l. EP
- *243. 6.90 g 20.1 mm Berlin. 1900 ex Imhoof. *KlMünz* 2, p. 424, no. 3, pl. 16, no. 8 (rev. only)
- Rev.* to l. A IΓE / AIΩN and ΔI (year 14, 34/3 B.C.); to r. MH
- *244. 4.30 g 19.4 mm Berlin. 1900 ex Imhoof. *KlMünz* 2, p. 425, no. 6, pl. 16, no. 9
- Rev.* to l. A IΓE / AIΩN, same date as 244
245. 3.53 g 17.5 mm London. *BMCLycaonia* 18. *KlMünz* 2, p. 425, no. 7, pl. 16, no. 10. The H to the far r. partly off flan
- 245a. 6.36 g Sternberg 12, 18-19 Nov. 1982, 279. *Obv.* = 245; *rev.* die as 249.
246. 4.17 g 18.0 mm London
247. 3.74 g 17.5 mm Lindgren. The H partly failed during the process of striking
248. 3.64 g 18.5 mm Levante
- *249. 3.01 g 17.7 mm Copenhagen
250. 2.75 g *SNGvAulock* 5444

Bronze "thirds"

Obv. Head of Herakles r., with taenia; dotted border.

Rev. Ethnic; club and bow in case; no border (251-55); dotted border (256-59).

Rev. above ΑΙΓΕΑΙΩΝ; below, traces of letters destroyed by oxidation?

251. 1.99 g 14.5 mm Berlin

Rev. above ΑΙΓΕΑΙΩΝ; below ΝΙΚΙ

252. 1.63 g 13.8 mm London

Rev. below ΑΙΓΕΑΙΩΝ; above ΝΙΚΙ

253. 2.15 g *SNGvAulock* 5440

*254. 2.19 g 15.2 mm Levante

255. Adana. Cox, no. 72, pl. 3

Rev. below ΑΙΓΕΑΙΩΝ; above ΔΙΜΗ

*256. 1.97 g 14.3 mm Lindgren

257. 1.89 g 14.1 mm Winterthur 6467. Gift E. Levante

258. 1.70 g 14.3 mm Cambridge, Leake 5223

259. 1.90 g 13.5 mm Levante

B. Special Issues

Bronze "units"

Obv. Head of City, turreted and veiled; dotted border.

Rev. Ethnic, horse's head; apparently no border (260, if not worn away by oxidation like the border on the obv. of which only two dots are left); dotted border (261–63).

Rev. ΑΙΓΕΑΙΩΝ; to r. traces of ΕΡ ?; below ΔΙ (year 14, 34/3 B.C.)

260. 3.60 g 19.1 mm Paris 55. *Waddington* 4062

Rev. ΑΙΓΕ / ΑΙΩΝ; to r. ΕΡ ; below same date as 260

261. 7.80 g ca 23 mm once Levante. Alphas with dot. Known only from a photograph of a cast, and from scanty notes

*262. 5.87 g 20.2 mm Berlin. 1873 et Fox. Bloesch, "Tetradrachms," pl. 1, no. 13

263. 4.42 g 18.9 mm Berlin. Ex Imhoof

Bronze "halves"

Obv. Athena, draped bust r.; dotted border.

Rev. Ethnic, goat lying l.; dotted border.

Rev. below ΑΙΓΕΑΙ / ΩΝ; above ΕΡ; to l. ΔΙ (year 14, 34/3 B.C.)

264. 3.20 g 16.2 mm Berlin. Ex Imhoof

265. 2.85 g 16.3 mm ANS. From Tarsus

Rev. below ΑΙΓΕΑΙΩΝ; above ΕΡ; to l. same date as 264

266. 2.78 g 16.4 mm London. *BMCLycaonia* 15

267. 2.72 g 16.3 mm Levante

Rev. below ΑΙΓΕΑΙ / ΩΝ; above ΕΡ; to l. same date as 264

268. 3.11 g 15.8 mm Levante

*269. 2.87 g 16.3 mm Levante

Rev. below ΑΙΓΕΑΙ / ΩΝ; above ΕΡ; to l. same date as 264

270. A. G. Malloy 29, Aug.-Sept. 1972, 528

271. 2.66 g 16.6 mm Winterthur 6267

Rev. below ΑΙΓΕΑΙ / ΩΝ; above ΕΡ; to r. same date as 264

*272. 2.34 g 14.5 mm Paris 1971-361

273. 2.09 g 15.6 mm Winterthur 6246

274. 1.91 g 16.0 mm London. *BMCLycaonia* 16

Bronze "units" on broad flans (after ca. 30 B.C. ?)

Obv. Head of Zeus r.; dotted border.

Rev. ΑΙΓΕΑΙΩΝ; Athena with spear and shield to l., holding Nike upon her r. hand; no border.

Rev. to l. ⸮, beneath ΟΙ (probably year 19, 29/8 B.C.)

*275. 8.50 g 22.0 mm Vienna 19034. *Musei Theupoli antiqua numismata* (1736), pt. 2, p. 1266. Mionnet, *Suppl.* 7, p. 152, no. 7

*276. 6.16 g 22.4 mm Levante

Obv. Bust of Athena r.; dotted border.

Rev. ΑΙΓΕΑΙΩΝ; Tyche standing l., with cornucopiae and tiller; apparently no border.

Rev. to l. ⸮, beneath ΟΙ (probably year 19, 29/8 B.C.)

*277. 8.82 g 23.9 mm Bologna. On this coin the tiller has no hook.

Rev. to l. ΕΜ

278. 8.97 g 23.6 mm Copenhagen. *SNGLycaonia* 33

*279. 7.80 g 23.9 mm Copenhagen. *SNGLycaonia* 32

279a. 7.89 g Gotha. Vertical upright axis

280. 7.57 g 24.5 mm Levante

TABLE I

Die Links and Axes

Period 1					
1 Oxford	↑		33 Lindgren	↑	
2 Berlin	↑		*34 Levante	↑	
3 Oxford	↑		35 Levante	↑]
* 4 ANS	↑		36 Paris	↑	
5 London	↑		37 Munich	↑	
6 Nomos	↑		38 Aulock]
7 Hanscotte	↑		*39 Levante	↑	
* 8 ANS	↑		40 London	↑	
			41 Paris	↑	
			42 Berlin	↑	
			43 Winterthur	↑	
			44 Winterthur	↑	
Period 2			45 New Haven	↑	
9 Winterthur	↑		46 Oxford	↑	
10 Adana			*47 Levante	↑	
*11 Levante	↑		48 Bologna	↑	
12 Paris	↑		49 Munich	↑	
13 Levante	↑		50 Antakya		
14 ANS	↑		51 Levante	↑	
15 London	↑		52 New Haven	↑	
16 Levante	↑		53 Vienna	↑]
17 London	↑		54 Oxford	↑	
*18 Oxford	↑		55 Oxford	↑	
19 Paris	↑		56 Cambridge	↑	
			*57 Copenhagen	↑]
Period 3			58 Vienna	↑	
20 Paris	↑		59 Levante	↑]
21 Antakya]	60 Winterthur	↑	
22 Paris	↑		61 Winterthur	↑	
*23 Levante	↑		62 Antakya		
24 Winterthur	↑		63 Lindgren	↑	
25 Berlin	↑		*64 Paris	↑]
*26 Winterthur	↑		65 Oxford	↑	
27 Levante	↑		66 Athens	↑	
28 Levante	↑		67 Levante	↑	
29 Oxford	↑		68 ANS	↑]
30 Berlin	↑		69 Paris	↑	
31 Oxford	↑		70 Levante	↑	
32 Aulock			*71 Levante	↑	

72 Vienna ↑
 73 Glasgow
 [74 Levante ↑]
 * 75 Oxford ↑
 [* 76 Levante ↑
 77 London ↑
 78 Levante ↑
 79 Aulock ↗
 80 Paris ↗
 * 81 Berlin ↑

Period 4

[82 Paris ↑
 83 London ↑
 84 Glasgow
 85 Berlin ↑
 86 Berlin ↑
 * 87 Levante ↑
 88 Leu ↗
 89 Leu ↑
 90 Adana
 91 ANS ↑
 [92 Oxford ↑
 93 Aulock
 94 Winterthur ↑
 * 95 Winterthur ↑
 96 New Haven ↑
 97 Vienna ↑
 98 Milan ↑
 99 Oxford ↑
 100 Winterthur ↑
 * 101 Levante ↑
 * 102 Levante ↑
 [103 London ↑]
 * 104 Paris ↑
 105 Cambridge ↑
 106 Oxford ↑
 107 Levante ↑
 * 108 Levante ↑
 * 109 Winterthur ↑

* 110 Berlin ↑
 [* 111 Levante ↑
 112 ANS ↑
 * 113 Paris ↗
 114 ANS ↗
 [115 Berlin ↑
 116 Berlin ↑
 117 Paris ↑
 118 Milan ↑
 119 Oxford ↑
 [* 120 Levante ↑
 121 Vienna ↗
 122 London ↑
 [123 Paris ↑
 124 Paris ↑
 * 125 New Haven ↑
 126 Winterthur ↑
 127 Weber
 [* 128 London ↑
 129 once Leake ↗
 130 Oxford ↗
 [131 Paris ↑
 132 Levante ↑
 133 Adana
 134 Paris ↑
 [135 once Levante ↑]
 * 136 Levante ↑
 137 Levante ↑
 138 Beirut
 [139 Levante ↑]
 140 Copenhagen ↑
 141 Winterthur ↑
 142 Cambridge ↑
 143 Ratto
 144 Munich ↑
 145 London ↑
 * 146 Berlin ↑
 147 Vienna ↑
 148 Glasgow
 149 Berlin ↑
 150 Oxford ↑
 [* 151 Paris ↑
 152 London ↑

*153 Winterthur	↑	196 Levante	↑
154 Aulock		197 Oxford	↑]
155 Agora Ltd.		198 London	↓]
156 Levante	↑]	*199 Levante	↓]
*157 Paris	↑	200 Adana	
158 Paris	↑	201 Sestini	
*159 Copenhagen	↑	202 Athens	→
160 Paris	↑	203 Oxford	→
161 Levante	↑		
162 Vienna	↑		
*163 ANS	↑	Period 5	
*164 Copenhagen	↑	*204 Paris	↑
165 Bologna	↑	*205 once Mabbott	
*166 Berlin	↑	206 Glasgow	
*167 Levante	↑]	*207 London	↑
168 London	↑]	*208 Winterthur	↑
169 ANS	↑	*209 once B. Pozzi	
*170 Glasgow		*210 Levante	↑
171 Oxford	↑	211 Paris	↑
172 Winterthur	↑	*212 Copenhagen	↑
*173 Levante	↑]		
174 Berlin	↑]	Period 6	
175 London	↑	213 ANS	↑]
176 Cambridge	↑]	214 Levante	↑]
177 London	↑]	215 Paris	↑]
*178 Levante	↑	*216 Winterthur	↑]
179 Copenhagen	↑	217 ANS	↑]
180 Paris	↑	218 Oxford	↑]
181 Oxford	↑	*219 Levante	↑]
*182 Levante	↑	*220 Winterthur	↑]
183 Adana		221 Berlin	↑]
184 Vienna	↑	222 Copenhagen	↑]
185 Bologna	↑	223 Aulock	↑]
*186 Levante	↑	224 Paris	↑]
187 Oxford	↑	225 Evelpides	↑]
*188 Berlin	↑	226 Paris	↑]
*189 ANS	↑	227 London	↑]
*190 Copenhagen	↑	*228 Munich	↑]
191 Vienna	↑]	229 ANS	↑]
192 Paris	↑]	230 Winterthur	↑]
*193 Winterthur	↑]	231 Levante	↑]
*194 London	↑]	232 Cambridge	↑]
195 Winterthur	↑]		

*233 Lindgren	↑		257 Winterthur	←
234 once Levante	↑		258 Cambridge	←
*235 Levante	↑		259 Levante	→
*236 London	↑		260 Paris	↑
237 Levante	↑		261 once Levante	↑
238 A.G. Malloy			*262 Berlin	↑
*239 London	↑		263 Berlin	↑
[*240 Berlin	↑]	[264 Berlin	↑
241 Levante	↑		265 ANS	↑
242 Paris	↑		266 London	↑
*243 Berlin	↑		267 Levante	↑
*244 Berlin	↑		268 Levante	↑
245 London	↑		*269 Levante	↑
[246 London	↑		270 A.G. Malloy	
247 Lindgren	↑		[271 Winterthur	↑
248 Levante	↑		*272 Paris	↑
[*249 Copenhagen	↑]	273 Winterthur	↑
250 Aulock			[274 London	↑
251 Berlin	←		*275 Vienna	↑
252 London	→		*276 Levante	↗
253 Aulock			*277 Bologna	↑
*254 Levante	↘		278 Copenhagen	↑
255 Adana			*279 Copenhagen	↑
*256 Lindgren	←		280 Levante	↑

CLASSIFICATION AND CHRONOLOGY

There are several starting points which are helpful in building up a classification of the hellenistic coins of Aegeae within their chronological frame. Let us begin with the bronze coins to which the major part of this article is devoted.

DATED COINS

The coins with portrait of Antiochus IV are dated by this ruler (175–164 B.C.). A late hellenistic coin is dated year 10 (38/7 B.C., no. 239), quite a few others year 14 (34/3 B.C., nos. 244–50, 256–59, 260–74),

and, most probably, three more year 19 (29/8 B.C., nos. 275-77).⁴ The dates refer to the Caesarian era beginning 47/6 B.C. These coins are associated with a number of issues which may thus be placed in the second half of the first century B.C.

EXCAVATION COINS

Other chronological indications are of a different nature. The excavation coins from Tarsus⁵ have been admirably worked through, and the development of hellenistic issues is well established. The bronze coins of Aegeae are, of course, not plain imitations of the Tarsus coins, but it is obvious that the main stages of development are the same. In consequence the coins on which the head of the City has no veil are to be dated earlier than about 120 B.C. whereas the representation of the veiled bust of the City must be later.

LEGENDS

Varying legends, in some cases also their position on the flan, have to be considered. The bare ethnic ΑΙΓΕΑΙΩΝ was used from the beginning of coinage at Aegeae including the first series of coins with veiled bust of the City. The succeeding series of bronze coins bear titles: for a short period ΑΙΓΕΑΙΩΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΣΥΛΟΥ and for many years ΑΙΓΕΑΙΩΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ. There are other mints where these titles appear, some of them on dated coins which are compiled in the following table.

There is no document, unfortunately, which states clearly when and why Aegeae was presented with the right of autonomy. Her history forbids us from thinking of King Tigranes as the benefactor who bestowed this important right upon the township, as indeed he did with Laodiceia and Sidon. The general appearance of the autonomous coins is espe-

⁴ No bar above the numeral. This, however, occurs also on nos. 256-59, and is the rule with dates on coins of other mints.

⁵ D. H. Cox, "The Coins," in *Tarsus 1 Text*, ed. by H. Goldman, pp. 38-83 (hereafter, *Tarsus 1*), and *Tarsus 2 Plates*, figs. 87-92.

TABLE 2
Titles as Recorded on Silver and Bronze Coins

B.C.	Antioch	Apameia	Seleuceia	Laodiceia	Phoenicia and Palestine
			asylus		
140			138/7		
130					Tyrus asylus 126/5
120					
			autonomous		
110			108/7		
					Tripolis autonomous ca. 105-95
100	Metropolis				
90	92/1				Sidon asylus 82/1
80		asylus 76/5		autonomous 81/0	
70					
60					
50	asylus and autonomous 47/6 autonomous 42/1			Julia 47/6	
40		autonomous ca. 41-39 asylus			
30		30/29			

cially like the hellenistic coins of Tarsus struck before the invasion of Tigranes (*Tarsus* 1, fig. 89). A possible date for the inauguration of the autonomy of Aegeae toward the end of the second century B.C. has been derived from scanty and controversial material and is open to question (compare Bloesch, "Tetradrachms," and see below).






It is easier to determine when Aegeae lost her autonomy again. The above mentioned coins dated year 10, year 14, and possibly year 19 bear no title. Nor do the coins which by type and fabric go with them. They all find their place in the third quarter of the first century

B.C. There can be little doubt that it was Julius Caesar himself who deprived the town of her old right. If, as has been suggested in the introduction, the people of Aegeae opened their harbor to the fleet of Tarcondimotus, Pompey's ally in the war against Caesar, it is understandable that they had to be punished. Some years later, on another occasion, Apameia in Syria suffered the same fate.⁶

LETTERING

There is some variation in letter shapes. Alpha is written Α, Α, Α, Α or Λ, and sometimes, especially with coins in bad condition, it is difficult to make out which variation is actually meant. This, however, is of little consequence except for verifying a die link, as any of the above variations may turn up anywhere in the series of coins. It is different with the shapes of epsilon and sigma. Ε and Σ are used from the beginning to the fifties of the first century B.C. From this time onward, Ε, ϸ, and C creep in more and more but are never exclusively used.

MONOGRAMS

Period 1 coins have no letters or monograms at all. In Period 2 there are only single plain letters known. They have been put rather arbitrarily at the end of the short series. In Periods 3 and 4 true monograms, mostly plain, but increasingly more complicated are prevalent, whereas in Periods 5 and 6 they are often superseded by groups of two or three letters, or by the first four letters of a personal name. This development is paralleled to a certain degree by the use of monograms and letters on coins of Tarsus (see *Tarsus* 1, figs. 88–89). Small differences in the rendering of a monogram have not been taken into consideration. It is obvious that , , and  have the same meaning, and so must have  and .

⁶ Much of this discussion I owe to H. Seyrig, "Antiquités Syriennes, 42. Sur les ères de quelques villes de Syrie," *Syria* 27 (1950), pp. 5–50.

Different denominations bearing the same monogram or control letter have here been taken as belonging to the same series of issues. The sequence of coins thus obtained is usually supported by style, type and legend. There are, on the other hand, coins with monograms and letters, such as ΔΗ and ΕΜ, which, again by style, type and legend are clearly separated from each other. In these cases two officials may have had the same name, or the same person may have been entrusted with the same office a second time.⁷

There are only three monograms which may link one series of coins to the next one. Ɱ is well represented toward the end of Period 3, and the same monogram is exclusively used in the first series of coins in Period 4. Being a frequent monogram it is not certain whether it stands for the same man or not. The same is true with the letters ΔΗ which appear on autonomous coins in Period 5, and again early in Period 6 when autonomy was lost. Both Period 5 and 6 are linked by yet another monogram, and this time it looks as if it were a true link: ⱮϜ is a very rare composition of letters and may belong to an official (*Μόψος*) who survived the changes from pre-Caesarian to Caesarian times.

DIE LINKS AND AXES (see Table 1)

Obverse die links between coins bearing the same monogram on the reverse are quite frequent, but there is only one obverse linked with different monograms (nos. 153, 156–58). Therefore a die study which in other cases is often a most important working tool, helps very little here.

The die axes of coins of Aegeae oscillate from about two minutes to twelve o'clock to two minutes past twelve. Rarely are they beyond these limits. This rule is unbroken until late in Period 4, when, about

⁷ Compare R. Bauslaugh, "Posthumous Chian Alexanders," *ANSMN* 24 (1979), pp. 34–35. It is not clear whether our official ΕΡ was in charge only once, sharing his year with official ΜΗ, or whether he held his post during two or more years around 34/3 B.C.

For the function of monograms see also J. G. Milne, "The Mint of Kyme in the Third Century B.C.," *NC* 1940, pp. 132–235; *Tarsus* 1, pp. 52–53.

TABLE 3

	<i>Cilicia</i>			<i>Antioch</i>	<i>Seleucia</i>	<i>Laodicea</i>	<i>Sidon</i>	<i>Tyrus</i>
	<i>Aegeus</i>	<i>Tarsus</i>	<i>Other Mints</i>					
230								
220				Seleucus II				
210				Antiochus III				
200								
190								
180								
170	Antiochus IV			Antiochus IV				
160	City not veiled	City not veiled	City not veiled				Dem. I	Dem. I
150			<i>Adana</i>	ΛΔΕΛΦΩΝ				
140			<i>Corycus</i>	ΔΗΜΩΝ	Bala	Bala	Bala	Dem. II
130			<i>Hierapolis</i>	Antiochus VI				
120	City veiled	City veiled	City veiled	Antiochus VII				
110			<i>Adana</i>	Demetrius II				
100	Autonomous		<i>Celenderis</i>	Alexander II				
90			<i>Hierapolis</i>	Kleopatra				
80			<i>Mopsus</i>	Antiochus VIII				
70			<i>Soli</i>					
60				Antiochus XI				
50	Zeus/Athena		<i>Pompeopolis</i>	Municipal				
40			Tarcondimotus	Tigranes				
30								
20								

in the eighties of the first century B.C., the small "thirds" tend to get out of control. In Period 6, during the thirties of the century, the same small denomination is quite out of step, whether one takes the inscription or the bow in case as a guide for the upright position of the reverse. The reason for this is not clear, but it is noteworthy that larger coins struck with the same monograms and dates conform to the original positions.

SHAPE OF FLANS

The varying flan shapes of these coins is of greater chronological interest than one would think at first, especially when compared with flans used by other mints in the same area. The shape of a flan is, of course, a technical detail depending on implements used and fashions adopted at the different mints. It is, therefore, not to be expected that there will be a perfect coincidence in this field from one town to another. There are, however, common tendencies which are clearly to be seen in Table 3 although it is composed only from material available in the Winterthur coin cabinet and not so complete as one would wish.

The coins collected from mints outside Cilicia are all dated by actual dates or by rulers. For placing the coins of Tarsus the results published in *Tarsus* 1 have been used. The coins of Pompeiopolis and Tarcondimotus are only approximately dated but this is enough for the purpose. The general picture which emerges from the survey is quite clear and consistent. Thick, narrow flans comparable to those met with in Period 1 are in middle hellenistic times only to be found with Seleucus II and Antiochus III. Coins with head of Antiochus IV minted at Antioch are similar in shape to the coins produced simultaneously at Aegeae. The series of Tarsus coins with head of City without veil begins with regular, rounded flans. Soon, however, about 150 B.C., coins with chamfered edges appear at the mints of Syrian and Phoenician cities and spread out over the whole region. Only toward 90 B.C. is the fashion abandoned at most places, but not everywhere. Coins of Pompeiopolis with head of Pompey carry it on, and even at Antioch coins

with sharply cut chamfered edges exist right at the end of the first century B.C.

The coins of Aegeae were compared with this scheme. When fitting them in, it became evident that the sequence, built up with the help of the other criteria discussed above, needed not the slightest correction. The shape of the flans proved to be a good test for the validity of the work.

Coins with chamfered edges necessarily have a narrow and a spread side. In Periods 3 and 4 there was apparently no rule as to which side was reserved for the coin's obverse. In Period 6 many coins, especially the smaller denominations, were struck on regular flans. If, however, they had chamfered edges, these were very seldom on both sides as sharply cut as in Periods 3 and 4. Large coins, now always with the obverse on the narrow side, have a surface bending smoothly toward the sharp edge of the reverse. This flan shape clearly imitates Egyptian models and is very frequent during the Imperial period to the time of Domitian. Small coins, if chamfered, may have their obverse without preference on the narrow or on the spread side of the flan.

SILVER COINS

A difficult chronological problem is posed by the tetradrachms dealt with in Bloesch, "Tetradrachms." Their weights (14.24, 14.24, 14.16, 13.86 g), as O. Mørholm has pointed out, are too low for the proposed date, about 100 B.C., and also for the place of minting where silver coins of Attic weight would be expected. At this time only Sidon and Tyrus issued silver coins, surviving specimens of which average about 14 g. At Aegeae however, where full-weight regal silver from nearby Tarsus, Elaeussa and Antioch circulated, it is hard to imagine a silver standard matching officially the Phoenician standard.

The four tetradrachms are dated from year 4 to year 18. These dates, the bare ethnic, and the low weight which is equal to the weight of tetradrachms of Julia Laodiceia would fit admirably into our Period 6, from 47/6 B.C. onward. There are, however, some arguments against a low dating. The sequence of bronze coins which has been

established independently, cannot be turned the other way round. Most autonomous coins, and just these which are relevant in our case, have to be placed about 100 B.C., and by all means before the reign of Tigranes. Among the early autonomous bronzes there is the well attested monogram $\hat{\epsilon}$ which is also on the earliest tetradrachm. If we were to lower its date we would have to admit that two officials with the same extremely rare, probably unique, monogram were working 60 years apart. As regards style and ornaments of the City's head there are obvious relations between the tetradrachms and the autonomous bronzes. There are also indications of a common evolution of both silver and bronze with the well dated tetradrachms of Seleuceia Pieria (as argued by the author in "Tetradrachms"). Lowering the date of the tetradrachms of Aegeae we would again have to admit that two identical developments took place, divided by a span of time of 60 years. On the other hand, if we accept the high chronology, we face the difficulty of having to explain the difference in legends found on contemporaneous silver and bronze. There are mints like Sidon, Tyrus and Tripolis, where the silver bears full titles, the bronze not. For an inverted practice, however, there is no parallel.

Finally, let us return to the weights. We are, perhaps, too much impressed by the splendid weight of regal silver, 16 g and over. Municipal silver may not have always received the same attention. There are 82 tetradrachms of Seleuceia whose weights are known to the present writer: only 9 are 15 g and over, and no less than 10, mainly well preserved specimens, are between 13.95 and 14.30 g, not heavier than ours.

In the writer's opinion the arguments *pro* and *contra* rather favor the high chronology. In this survey the tetradrachms are thus placed with the autonomous bronze coins. This brings us to a beginning of the town's first era in about 105/4 B.C., if the points discussed in "Tetradrachms" are valid. The problem as a whole will probably be solved only by a big hoard of tetradrachms of Aegeae yielding more dates, weights, and monograms than known hitherto.

The classification and chronology advanced here are presented in a Tabular Survey at the end of the article.

REPRESENTATIONS

A. GODS, HEROES AND MORTALS

1. *The City of Aegeae* is depicted on tetradrachms, and often on bronze “units” as a head or bust, crowned with turrets.⁸ During Period 3 (about 160–120 B.C.) she looks young, maidenly, with barely indicated shoulders, and with two long curls of hair falling over the neck. At first, the hair of the crown of the head is visible through the interstices of the turrets. Sometimes the turrets are joined by a “city wall” which is either flat on top, or has a dot upon it. The latter may indicate the battlements on the other side of the crown. Some issues show her with an ornament at her ear, probably a hook ending in an animal’s head, a very common jewel in the hellenistic world.

From Period 4 (about 120–83/77 B.C.) onward the City, now represented with a small bust, invariably wears a veil drawn over the back of her head and slung around her shoulders and neck. At first her features are those of a matronly woman with a rather broad face and a friendly expression. Then her head becomes more youthful, slender and delicate, not unlike the heads of Period 3. Toward the end of the Period the tendency turns again, and soft, rounded forms are preferred, some of them showing a remarkable degree of plasticity. The City’s headdress, whose turrets increasingly show three rather than only two battlements, assumes at times the shape of a separate crown. Adding much to this impression is a distinct, plain edge below the turrets and above the hair. This edge is usually quite thin and on the latest specimens it changes to a heavy flat roll. A similar edge, originally derived from the diadem worn by the City goddess of Sidon occurs also on coins of Berytus and Byblos. In Cilicia it is found on coins of Corycus (the diadem still apparent), Elaeussa (before ca. 130–120 only), Celenderis, and Hierapolis. There is no ornament visible at the goddess’s ear during the first issues, on coins with half horse, and with *asylou*. At

⁸ The seated City of Seleuceia ad Tigrim, wearing the same headdress, is inscribed ΠΟΛΙΣ, see F. Imhoof, *Choix de monnaies grecques* (Winterthur, 1871), pl. 7, no. 227; *BMCArabia*, nos. 7–15.

the beginning of autonomy, however, she wears a cluster of grapes which soon gives way to an elongated pendant or a hook-shaped ornament resembling the ornament on coins of Period 3.

Period 5, after the return of the citizens of Aegeae from Tigranocerta, is characterized by several representations which may have been imitated from earlier models. They lack uniformity as well as an intelligible development, and are of rather low quality. The series as a whole was an experiment, an unsteady rebeginning after a serious break in the minting tradition following the disastrous exile of the inhabitants over many years.

With Period 6 (47/6–ca. 27 B.C.), which is outstanding in several respects, the long sequence of bronze “units” with turreted head of the City ends and is replaced by “units” with Zeus and Athena. There is only a sporadic commemorative issue dated year 14 (34/3 B.C.), depicting the City goddess. The general shape of head and headdress is in the old manner, yet the gloomy face and classicising style are new. There are more commemorative coins with hellenistic types to be found in early Imperial coinage, especially during the reigns of Tiberius, Claudius, Domitian and Antoninus Pius.

2a. Head of Athena. Athena appears first in Period 1 (late third/early second century B.C.) on the obverse of bronze “units” and on the only known “two-thirds” coin minted at this time. She wears a Corinthian crested helmet, and three stiff curls fall over her neck of which only the front is visible. The style is rather provincial and often clumsy.

Later a similar head of Athena is used on the smaller of the two denominations; in Period 6, however, it is on the “halves.” The style of her head changes perceptibly, in fact more than the style of the contemporary City heads. The “two-thirds” have therefore mostly been taken as a guide for the succession of monograms,⁹ and to this the sequence of “units” and “thirds” has been adapted.

The first Athena of Period 3 is clearly a descendant of the type met with in Period 1. Soon, however, the head becomes neater, the three

⁹ This had not been developed at the time of writing the article cited in n. 1, hence the differences in the listing.

stiff curls over the neck give way to a soft rendering of the hair, and the shape of the helmet becomes more ornamental.

Period 4 begins with a broad-necked, square type of head covered with a helmet to which a clearly marked neckpiece flaring off rather horizontally is attached. This part of the helmet descends along the neck in later specimens. In general the representation of Athena shows a similar evolution as in Period 3, and there is also a tendency toward smaller proportions.

Period 5 is represented by only two known specimens of which the first must have been made by an incompetent imitator of coins like the latest "two-thirds" of Period 4.

In Period 6 we are offered a much more pleasant insight into the skill of the die cutters at Aegeae. The coins, all dated year 14 (34/3 B.C.), show the capacity of the artist to impart something of the grandeur of the goddess Athena into his work. This is not merely due to the change of the representation from a head to a large bust of Athena, but to accurate shapes and harmonious proportions.

Two issues of large coins with bust of Athena may be mentioned as precursors of similar coins in the early Imperial period. One of them is probably dated year 19 (29/8 B.C.), at the end of the hellenistic coinage at Aegeae.

2b. *Athena standing.* The representation of Athena standing to the left, with shield and spear, holding Nike upon her right hand, is found on Syrian regal coinage and would be expected to occur also at Aegeae. We find it on two groups of coins, on the tetradrachms, and on the "regular" bronze "units" of Period 6. On the latter ones Athena is first a rather stiff, puppet-like figure, then, in the thirties of the first century she is clearly shaped after a classical ideal.

3. *Herakles* and his attributes, club and bow in case. The general subject is, of course, a hint of the Macedonian descent of the people of Aegeae. Except for the tetradrachms where there is a solitary club, Herakles and his attributes are confined to the bronze "thirds" and to an apparently unique "sixth." The head of Herakles has, with rare exceptions, a short truncated neck. His hair is first tied with a wreath, then, from Period 4 onward, with a fillet. There is a club on the reverse of the bronze "thirds" coined during the reign of Antiochus IV.

In Period 3 the club is tied with a fillet, and in Period 4 and later it is always accompanied by a bow in case.

4. *Zeus* plays little part in the coinage of Aegeae. His wreathed head is found only on the bronze "units" of Period 6 where it is coupled with the standing Athena mentioned above. Its development leads from a severe, somewhat angular physiognomy to the beauty of a friendly well-groomed gentleman. The rendering of the head is certainly derived from prototypes found on municipal bronze coins of Antioch. Especially close to our earlier variation is *BMCGalatia*, p. 155, no. 30, dated 42/1 B.C., whereas the general scheme of the later variation with two corkscrew locks behind the ear is common from the early eighties right through the first century B.C. The stylistic development of this series of coins tends from a compact plasticity to a rather soft, ornamental design which was aptly imitated at Aegeae. The type is carried on to the group of large heavy bronzes which may tentatively be dated after ca. 30 B.C.

5. *Nike*. There are three series of coins bearing her figure. She is held upon the hand of the standing Athena on the tetradrachms as well as on the "regular" bronze "units" of Period 6. In both instances she merely plays the role of an attribute of Athena. As an independent reverse type she appears on the bronze "two-thirds" in Period 6. She is depicted walking to the left, holding a palm branch over her left shoulder and a wreath in front of her. It may be asked whether here, on a series of coins beginning soon after Caesar's intervention in Cilicia, the representation of Nike may not have a political rather than an agonistic or a general meaning.

6. *Tyche* and her attributes, cornucopiae and rudder or tiller, which are most favored in hellenistic coinage elsewhere, are practically non-existent at hellenistic Aegeae except at the end of the pre-Imperial series. Here Tyche appears on two issues, one of them probably dated year 19 (29/8 B.C.), the other one placed not too far off on grounds of subject, style, and fabric. At Aegeae Tyche becomes more popular only during the Imperial period.

7. *Alexander the Great*. A youthful head on the obverse of the bronze "two-thirds" with Nike on the reverse ("regular issue," Period 6) may

confidently be called Alexander. A single head picked out of the series and analyzed by itself would not necessarily lead to this conclusion. Considering however the whole group of coins, and taking into account Alexander's portraits on Imperial coins of Aegeae, not to speak of the many hints of the Macedonian descent of the inhabitants, it is pretty certain that the young heroized head with its upturned forelock and the royal taenia was meant for Alexander. The manner of representation varies considerably, and if one sees how different the rendering can be on coins dated the same year it becomes clear that there is no rigid classification possible on "portraiture" alone. In this field too much was left to the imagination of the die cutter.

8. *Antiochus IV* of Syria. His portrait, recognizable by the protruding back of the head and by the characteristic face, is on the obverse of all coins of Period 2. It is youthful, slightly tilted backward, and tied with a royal fillet. The representation is more or less on the same individual and artistic level as the corresponding ones in other municipal coinages (see above, n. 2).

B. ANIMALS

1. *The horse's head*, as found on bronze "units" of the second to the fifth Periods as well as on some "commemorative" coins of the sixth Period, is always turned to the left, and is bridled. So is the half horse which occurs at the beginning of Period 4. Exceptions seem to occur in Period 5, but this may be due to the bad condition of some of the specimens recorded. They are, however, by far in the minority: the early representations especially show the bridle as clearly as possible. Bridles are not unusual with mythical horses, such as winged Pegasus. Yet the half horse of Period 4 has no wings. Therefore a mortal or "half mythical" horse is more likely. Considering the enthusiasm for Macedonia at Aegeae, and for the greatest Macedonian, Alexander, we may not be too far off in calling the horse Bucephalus.

2. *The goat* is the canting device of Aegeae and appears in Period 1 and from Period 3 to Period 6. It is a he-goat with long curved horns and, sometimes visible, genitals and a small beard. The goat's posture

changes gradually. First, in Period 1, he is slowly walking to the left. In Period 3 he is always standing, the two forelegs parallel, the hind legs a little apart. At the beginning of Period 4 he is lying down. Two series of coins of Period 4 are closely tied to each other, the half horse issues (monogram ⌘) and the *asylou* issue (monogram Δ) by the respective goats which look as if they had been modelled after one prototype. During the same Period the goat has his head bent, contemplating his right foreleg. Later on, in Periods 5 and 6, he decidedly lifts his head. Small coins of the Imperial period continue this pattern for quite a long time, and it dies out only after the reign of Antoninus Pius.

COUNTERMARKS

Countermarks are found only on 9 of the 280 Hellenistic coins of Aegeae at present known to the author. Two of them are on bronze "units" of Period 3. They are a clearly cut Macedonian helmet to the left which is punched into the reverse of no. 34, one of the issues with monogram ⌘ , and a bridled horse's head right, on the reverse of no. 52 with monogram ⌘ . Both depressions are oblong. The other seven countermarks are on the obverses of coins of Period 4. Coin no. 133, with monogram ⌘ , and coin no. 137, with monogram ⌘ , both have a sharply cut head to the right in a square depression. Coin no. 146, bearing the same monogram, has two marks, one with the bearded head, and another one with head of the City to the right in a circular depression. The following countermarks have again been applied with a square punch. Coin no. 158, with monogram ⌘ , bears a youthful beardless head to the right. In addition there are countermarks on three different issues with monogram ⌘ : on no. 159 there is a sharply cut eagle, and nos. 160 and 162 have the bearded head mentioned above. It was used, however, only when the punch had already been considerably weakened.

The Macedonian helmet, certainly the bridled horse, perhaps also the head of the City, all three in oblong or round depressions, were probably

used by the authorities of Aegeae. Of the other ones, the eagle may have been applied during the reign of Tigranes.¹⁰

DENOMINATIONS

The denominations used in this article are based on the relationships between present weights, and the coins may have been called something quite different in ancient times. Also it may be argued that today's weights are not the same as they were at the time of minting. This is true, yet we must content ourselves with the interrelation of the weight differences.

The following table of weights does not stand alone but must always be consulted together with the catalogue of coins. Where there are many coins of the same denomination the average weight, expressed in one figure, is fairly accurate. Where there exists only one coin, or a very few, the real average weight may differ more widely from the actual figure. There are also factors which obscure the picture, if only to a certain amount. Thus the low weight of the coins in Period 5 may be partly due to the unfavorable conditions under which the mint was working after the people of Aegeae returned from exile. On the other hand there are the "thirds" of Period 3. They are overweight in relation to the "unit," as if they were still related to a "unit" of over 7 g.

Somewhat different from the preceding Periods is the situation in Period 6. On the "units" the old representations were changed to new ones (Zeus and standing Athena), on the "two-thirds" there are now Alexander and Nike, and a "commemorative" issue seems to be a rather light-weight "half." Upon it were transferred the bust of Athena and the lying goat both of which for a long time had adorned the "two-thirds." The "thirds" remained unchanged.

¹⁰ Two eagles looking back (not straight forward as ours) adorn the tiara of Tigranes. In general compare *Tarsus* 1, pp. 55 and 59. An eagle similar to ours, but on an oblong punch, has been put on the obverse of a coin of Hierapolis, see A. Dupont-Sommer and L. Robert, "La déesse de Hiérapolis Castabala (Cilicie)," *Bibl. archéol. et hist. de l'institut français d'archéologie d'Istanbul* 16 (Paris, 1964), no. 5, 3, fig. 10.

TABLE 4: Average Weights

<i>Period</i>	<i>"Units"</i>	<i>"Two-Thirds"</i>	<i>"Thirds"</i>	<i>"Sixth"</i>
1	6.73	4.52		
2	7.12		2.54	
3	6.39	4.80	3.58	1.13
4	6.39	4.20	2.44	
5	5.33	3.62		
Average of Periods 1–5 (ca. 200–47)	6.39	4.29	2.85	1.13
Period 6 (47/6–34/3)	<i>"Units"</i> 6.54	<i>"Two-Thirds"</i> 4.04	<i>"Halves"</i> 2.65	<i>"Thirds"</i> 1.93
(ca. 30–27)	<i>"Units" (?)</i> 7.96			

The last known pre-Imperial coins of Aegeae differ, by weight, from anything hitherto issued by this mint. With an average of 8.22 g they indeed approach the standard used for certain groups of coins in early Imperial times. The picture would probably become clearer by comparing it with the bronze coinage of other communities in the region and of the coastal towns of Syria, but this is beyond the scope of this article.

TABULAR SURVEY

ca.	Bronze 'units'	Bronze 'two-thirds'	Bronze 'thirds'	Bronze 'sixth'	Compare
200	Athena/goat standing ΑΙΓΕΑΙΟΝ				
175	Antiochus IV / horse's head ΑΙΓΕΑΙΟΝ N Φ		Antiochus IV / club ΑΙΓΕΑΙΟΝ H		
164	City not veiled / horse's head ΑΙΓΕΑΙΟΝ H Α Φ Σ Α Ν Α	Athena / goat standing ΑΙΓΕΑΙΟΝ M H Α Φ Σ Α Ν Α	Herakles / club, fillet ΑΙΓΕΑΙΟΝ Α Φ Σ Α Ν Α	Herakles / tripod ΑΙΓΕΑΙΟΝ (no monogram)	<i>Tarsus</i> City not veiled <i>Tarsus</i> I, fig. 88, nos 131, 134, 137 ("ca. 160 – 135 B.C.") <i>Tarsus</i> I, fig. 88, no. 147 ("ca. 125 – 123 B.C.") <i>Tarsus</i> , City veiled <i>Tarsus</i> I, fig. 89, esp. letters I and L ("ca. 121 – 113", and "about 111 B.C.")
110	City veiled / half horse Α	Athena / goat lying Α	Herakles / club, bow in case Α		

ca.	Tetradrachms	Bronze 'units'	Bronze 'two-thirds'	Bronze 'thirds'	Compare
110/9	City veiled / Athena	City veiled / horse's head ΑΙΓΕΑΙΩΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΣΥΛΟΥ	Athena / goat lying ΑΙΓΕΑΙΩΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΣΥΛΟΥ	Herakles / club, bow in case	Tetradrachms of <i>Selaucia Pieria</i>
105/4	ΑΙΓΕΑΙΩΝ (earring pendent)	Α (earring pendent)	Δ	ΑΙΓΕΑΙΩΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ	Δ = 4 (curl only) Ε = 5 (curls only) Ζ = 6 grapes Ζ = 7 "
102/1	Δ = 4 Ε grapes	Α Α (earring pendent) grapes Α elongated (grapes?)	Α Α	Α	Θ = 9 " Ι = 10 grapes or ring ΑΙ = 11 " ΒΙ = 12 " ΓΙ = 13 ring ΔΙ = 14 " ΕΙ = 15 " ΣΙ = 16 " ΖΙ = 17 " ΗΙ = 18 "
93/2	ΙΓ = 13 ΔΙ Δ	Α hook	Α	Α	ΒΚ = 22 "
90/89	ΙΕ = 16 " disc-and-hook	Α "	Α	Α	
88/7	ΙΗ = 18 " " "	Α "	Α	Α	
87/6		Α	Α	Α	

ca.	Political Situation	Bronze 'units'	Bronze 'two-thirds'	Bronze 'thirds'	Compare
86/5		City veiled / horse's head ΑΙΓΕΑΙΟΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ	Αθena / goat lying ΑΙΓΕΑΙΟΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ	Herakles / club, bow in case ΑΙΓΕΑΙΟΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ	
83/2	Tigranes conquers Cilicia	ΜΡ ΑΡ Ε?	ΑΡ ΚΑ ΜΡ ΕΞ	Κ ΚΑ	<i>Tarsus</i> City veiled <i>Tarsus</i> I, fig. 89, bottom row ("ca. 85 – 80 B.C.")
77/6	People of Cilician Cities transferred to				
69/8	<i>Tigranocerta</i>				
67/6	Pompey reorganizes Cilician Cities				
53/2	Tarcondimotus (at <i>Hierapolis Castabala</i>) confirmed as Toparchus in his territory King after ca. 53 B.C.	ΑΙΓΕΑΙΟΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ ΔΗ	... ΗΣ ΙΕΡΑ ... ΔΗ ΑΙΓΕΑΙΟΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ ΑΥ	ΑΙΓΕΑΙΟΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ (Monogram off flan) ΑΙΓΕΑΙΟΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ	
47/6	Supports with his fleet (stationed at <i>Aegae</i> ?) Pompey against Caesar Caesar reorganizes Cilicia	ΑΙΓΕΑΙΟΝ ΤΗΣ ΙΕΡΑΣ ΚΑΙ ΑΥΤΟΝΟΜΟΥ Β ΣΔ ΕΜ ΙΕ		ΣΙ	

ca.	Regular Issues			Special Issues		
	Bronze 'units'	Bronze 'two-thirds'	Bronze 'thirds'	Bronze 'units'	Bronze 'halves'	Bronze 'units'
47/6	Zeus / Athena	Alexander / Nike	Herakles/club, bow in case	City veiled / horse's head	Athena / goat lying	Athena / Tyche
	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ
	"	"	"	"	"	"
	ΔΗ	ΔΗ	ΔΗ	ΔΗ	ΔΗ	ΔΗ
38/7						
	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ
	"	"	"	"	"	"
	ΔΗ	ΔΗ	ΔΗ	ΔΗ	ΔΗ	ΔΗ
34/3						
	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ
	"	"	"	"	"	"
	ΔΗ	ΔΗ	ΔΗ	ΔΗ	ΔΗ	ΔΗ
29/8						
	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ	ΑΙΓΕΑΙΩΝ
	"	"	"	"	"	"
	ΔΗ	ΔΗ	ΔΗ	ΔΗ	ΔΗ	ΔΗ

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CARACALLA OR ELAGABALUS? A CASE OF UNNECESSARILY MISTAKEN IDENTITY

(PLATES 23–24)

ANN JOHNSTON

Anyone who embarks on a study of the Greek Imperials rapidly discovers what a difficult task it is simply to gather enough material to be able to make sense of some minor part of the vast and diverse picture that the coinage presents.¹ The richest and most interesting

¹ The following abbreviations are used throughout:

- BMC** Reference is to catalogue number for the mint, in the appropriate volume of the *Catalogue of the Greek Coins in the British Museum*
- Cop** *Sylloge Nummorum Graecorum, The Royal Collection of Coins and Medals, Danish National Museum, Copenhagen*
- Fitz** *Sylloge Nummorum Graecorum, Fitzwilliam Museum, Leake and General Collections*
- JNG** *Jahrbuch für Numismatik und Geldgeschichte*
- Kraft** Konrad Kraft, *Das System der kaiserzeitlichen Münzprägung in Kleinasien* (Berlin, 1972)
- McClean** S. W. Grose, *Catalogue of the McClean Collection of Greek Coins* (Cambridge, 1929)
- MSPh** Hans von Aulock, *Münzen und Städte Phrygiens* 1, *Istanbuler Mitteilungen*, 25 (1980)
- MSPis** Hans von Aulock, *Münzen und Städte Pisidiens* 1 and 2, *Istanbuler Mitteilungen*, 19 (1977) and 22 (1979)
- RG** W. H. Waddington, E. Babelon and T. Reinach, *Recueil général des monnaies grecques d'Asie Mineure*, Paris (1904–12)
- vA** *Sylloge Nummorum Graecorum Deutschland, Sammlung H. von Aulock* (Berlin, 1957–68)

period, the first quarter of the third century, offers an additional hazard: the persistent misattribution of the coins of Caracalla and Elagabalus. Sabine Schultz in her book on Magnesia on the Maeander, for instance,² attributed almost all the coins of Elagabalus to Caracalla, and there is hardly a catalogue or a museum collection that is free of the problem. At least the more recent individual studies and *Sylloge* fascicules are normally well illustrated, so that mistakes can be corrected, but the older catalogues tended to ignore obverses with imperial heads and rarely provided photographs or even adequate descriptions of them. Sometimes the problem is acknowledged by a question mark ("Caracalla?"), but more often than not the pieces of one emperor are given without hesitation to the other, and the error is then perpetuated in subsequent catalogues and in museum trays.

The reason for all this confusion is the widely held belief that it is almost impossible to distinguish the coins of the two emperors because (a) both were called officially Marcus Aurelius Antoninus and hence cannot be identified by name alone, and (b) there is supposed to be a strong family resemblance between the two, since Elagabalus claimed to be the son of Caracalla, and was in fact his second cousin. The confusion does not extend to the Roman coinage proper, because the legends at Rome and at the official provincial mints usually include imperial titles, especially consulships and tribunician power, which

Waddington E. Babelon, *Inventaire sommaire de la Collection Waddington*, RN (1897–98)

Weber L. Forrer, *The Weber Collection* (London, 1926–29)

² *Die Münzprägung von Magnesia am Mäander in der römischen Kaiserzeit* (Berlin, 1975). The book has stimulated interest in the problem of distinguishing the two emperors: see Kenneth Harl, "Caracalla or Elagabalus? The Imperial Imago at the Greek Civic Mint of Magnesia ad Maeandrum," *ANSMN* 26 (1981), pp. 163–84, and C. J. Howgego, "Ionian Magistrates: Caracalla or Elagabalus?" *NC* 1981, pp. 147–49. Harl's article provoked me into attempting a more comprehensive treatment of the subject which I had originally encountered in making a catalogue of the coins of Sardis.

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separate Caracalla and Elagabalus unambiguously.³ Some Syrian cities include the consulship among their coin legends as a standard method of dating their issues (e.g. Antioch and Laodicea), but the practice is virtually unknown in Asia Minor. Since the Greek Imperials rarely include these titles, the coins have to be attributed by other means.

I would argue that the confusion is far worse than need be because few numismatists are aware of the many possible ways of approaching the problem. I believe that one can, in fact, learn to distinguish the portraits in many cases, but there are also many other clues which often permit identification to be made on more objective criteria. Admittedly few of the criteria are infallible, but that is unavoidable with a coinage as diverse as the Greek Imperials: there *are* no comprehensive rules which are universally applicable. On the other hand, it should be possible to make an identification on the basis of a combination of factors. In the following pages I shall try to set out the various clues with their limitations; the appendix is intended to provide a reference base for those wishing to check on a particular problem or to take the suggestions in the text further. The essential point to be made is that one should use all the available information: each individual coin can offer a variety of clues, but it is also important to see each coin in the context of other issues of the same city and the same area which may well provide crucial evidence.

The names do pose a problem: the obverse legends for both Caracalla and Elagabalus are likely to be variations on Autokrator Kaisar Markos Aurelios Antoninos (or Antoneinos) Sebastos, more or less abbreviated. It is occasionally possible to assign the coins on the basis of the omission of Autokrator Kaisar, though there are instances of omission for both emperors at various cities, so that this can only be used as an adjunct to other factors.⁴ However, as stated above, there is a great deal of

³ See *BMCRE* 5, where the distinctions in titulature etc. are clearly set out. Elagabalus took the titles of Pontifex Maximus and Pater Patriae from the outset, whereas Caracalla received them only after his father's death; Elagabalus' consulships mounted up rapidly with almost matching TRP, while Caracalla only gradually acquired consulships. The obverse legends for the two emperors are distinctive, and there are many other indications of identity.

⁴ The omission certainly distinguishes the coins of Elagabalus at Bithynium (Appendix, C.2), whereas it does not at Nicomedia (*RG* 231 and 246, both Caracalla

other information on a coin besides the obverse legend, and in any case I suspect that most numismatists who work with coins of the Roman Empire soon learn to recognize the *portraits*, and only read the legends afterwards in order to confirm their identification. In checking through the published catalogues for mistaken attributions I came across pieces of Antoninus Pius, Marcus Aurelius and Commodus, all masquerading as Caracalla or Elagabalus, although all were readily identifiable from their portraits.⁵ I would maintain that Caracalla and Elagabalus can be distinguished in the same way, by their portraits, and indeed that we were not meant to confuse them.

THE PORTRAITS

There is no problem with the portraits of the mature Caracalla, which are quite distinctive: bearded, thickset, extremely masculine in the manner of the traditional stereotype with the emphasis on physical strength. This version of the portrait dates from about 209 and continues throughout his sole reign (Plate 23, 2). The confusion arises in the coins of the young Caracalla, in the decade 198–208, as against those of Elagabalus at about the same age; Elagabalus was 14 to 18 years of age while he was emperor, 218–22, so Caracalla was of the same age between 202 and 206. Mattingly states the conventional viewpoint: “The portrait of Elagabalus, *assimilated to that of Caracalla*, is not very attractive and does scant justice to the great personal beauty which our authorities agree in attributing to him.”⁶

If the portrait really was “assimilated to that of Caracalla” it would be the result *either* of ignorance, because the engravers did not know what Elagabalus actually looked like and copied the young Caracalla as a reasonable compromise, *or* of deliberate policy, to make Elagabalus look as much as possible like his supposed father. There are other examples of rather unlikely portraits at the beginning of a new reign

because B NEΩKOPΩN [see below, p. 115], but with legend M AVP ANTΩNINOC AVTOV).

⁵ See Appendix C.1 (Marcus Aurelius), C.9 (Commodus), M.21 (Antoninus Pius), P.1 (Marcus Aurelius).

⁶ *BMCRE* 5, p. ccxxix.

when the emperor was acclaimed at some distant place: Macrinus could be taken as typical, with obverses at Rome and elsewhere derived from the equivalent of the old photographs which newspapers publish of people unexpectedly in the headlines.⁷ Macrinus ruled 14 months in all and never reached Rome, yet the mechanism whereby the imperial *imago* was transmitted throughout the Empire ensured that there were plausible likenesses of him on his coins before his death.⁸ Elagabalus ruled almost four years, travelled from Syria to Rome, and must have been seen by thousands of his subjects. There was plenty of time for engravers to produce reasonable portraits if they wished to or were instructed to. In fact the coin portraits are consistent throughout the reign at Rome and in the provinces, which would not be the case if he had been made to look like Caracalla initially, *faute de mieux*.

The notion that it was a deliberate matter of policy to emphasize the resemblance between Caracalla and Elagabalus derives from a passage in Cassius Dio (79.30.2ff.) in which he describes the efforts of Julia Maesa (the grandmother of Elagabalus and aunt of Caracalla) to get the soldiers encamped at Emesa to acclaim Elagabalus as emperor. Maesa had spent the previous 20 years with her sister, Julia Domna, at court in Rome and had been sent home to Syria after the murder of Caracalla. She seems to have decided that provincial life was too quiet for her taste—her grandson, with the backing of her own wits and wealth, offered the opportunity of a return to Rome. The army had acclaimed Macrinus, but was now dissatisfied with him; the soldiers recalled Caracalla with affection, partly because he had tried to be “one of the boys” and had virtually lived with the army, but also because of the generous donatives that he had given them. Why not persuade the army that Elagabalus was the son of her nephew Caracalla and hence the rightful emperor? The details of the story may be embroidered, but the essence is the same in Dio and Herodian:⁹ Maesa persuaded the soldiers

⁷ *BMCRE* 5, p. ccxiii and pl. 78.

⁸ E.g. Ephesus, Kraft, pl. 12, 21 a. For a contrary view, see Harl (above, n. 2).

⁹ See R. P. Saller, “Anecdotes as Evidence for Roman Imperial History,” *G&R* 27 (1980), pp. 69–73, urging caution in the use of such evidence; G. W. Bowersock, “Herodian and Elagabalus,” *Yale Classical Studies* 24 (1975), pp. 229–36, argues for the reliability of much of Herodian’s account. See also C. R. Whittaker’s in-

that there was a physical likeness between Elagabalus and Caracalla at the same age, that Elagabalus was indeed the son of Caracalla, and hence that they should acclaim Elagabalus as the true heir. Both Herodian and Dio also refer to the purses of money that Maesa gave to the soldiers and which may have been more persuasive than any supposed family resemblance; Herodian actually says that the soldiers saw the resemblance “because that was what they wanted to see” (Herodian 5.4.4).¹⁰

Apart from the passage in Dio, all the other accounts emphasize Elagabalus' extraordinary good looks and his effeminacy—the antithesis of Caracalla.¹¹ After the acclamation by the soldiers, there would have been no incentive to keep up the supposed resemblance to Caracalla, which would have been a liability, if anything, with the Senate in Rome. Elagabalus was obviously proud of his appearance, not to say vain, and he was anxious to be accepted as he really was. Julia Maesa was well aware of the conventional preferences of the Senate and people of Rome and realized that Elagabalus would not make a good impression if he arrived in Rome dressed, as he preferred to be, as the priest of Sol Elagabalus. She tried to persuade him to appear in more orthodox costume, but his answer was to have his portrait painted, wearing his priestly garb, and to have this sent ahead and hung in the Senate, so that everyone would be accustomed to his appearance by the time he arrived.¹² Herodian says that this was successful, though the historians all eagerly recount in minute detail the idiosyncrasies of the emperor's dress, make-up and jewelry, all as improper as everything else about him. It seems improbable that the fiction of Elagabalus'

trodition to the Loeb edition of Herodian, vol. 1 (1969), vol. 2 (1970) (London/Cambridge, Mass.).

¹⁰ Cass. Dio 79.32.2-3: *Τόν τε γάρ Ἀουῖτον, ὃν Μάρκον Αὐρήλιον Ἀντωνίνον ἤδη προσηγόρευον, περιφέροντες ὑπὲρ τοῦ τείχους, καὶ εἰκόνας τινὰς τοῦ Καφακάλλου παιδικὰς ὥς καὶ προσφερεῖς αὐτῷ ἀποδεικνύντες, παῖδά τε ὄντως αὐτὸν ἐκείνου καὶ διάδοχον τῆς ἀρχῆς ἀναγκαῖον εἶναι λέγοντες. Hdn. 5.4.4: οἱ δὲ πιστεύσαντες Ἀντωνίνου τε εἶναι τέκνον καὶ ὁμοιότατόν γε (βλέπειν γὰρ οὕτως ἤθελον)*

¹¹ E.g. Hdn. 5.3.7, in which he is even compared with statues of Dionysus; Cass. Dio 80.14.3-4 for his effeminacy, not to mention the colorful account in the *SHA*.

¹² Hdn. 5.5.6 and 8 (the result: *οὐδὲν παράδοξον εἶδον οἱ Ῥωμαῖοι, τῇ γραφῇ ἐνεθισμένοι*).

parentage would have been maintained on the coinage, by means of the *imago* issued as a model, when the connection with Caracalla was otherwise neglected, and the emperor conducted himself in what must be called a thoroughly individual manner. I think we can be sure the portraits of Elagabalus represent his actual features as accurately as the engravers could make them.

One of the clearest descriptions of the distinctive characteristics of Elagabalus is that of Bosch:¹³ "Elagabals syrischer Gesichtstypus ist auf allen Münzen seiner vier Regierungsjahre unverkennbar: ein von tiefen Rändern umgebenes Auge, eine scharfe Falte vom Nasenflügel zum Mundwinkel, eine dicke Unterlippe, und im letzten Jahre eine feiste Wange und eine grosse fleischige, etwas überhängende Nase charakterisieren ihn." Elagabalus never looks as childish as Caracalla did on his earliest portraits as Caesar and when first Augustus in 198 (Plate 23, 1). In general he looks rather more mature than his years. On a few of his Roman coins he is shown quite heavily bearded,¹⁴ but there are rarely even traces of a beard; Dio tells us that he usually had his whiskers plucked out in order to appear more womanly.¹⁵ Caracalla encouraged his beard, since he wanted to appear as manly as possible, but it does not show on his portraits at Rome until 205 (side whiskers) to 209 (full beard). Elagabalus' most distinctive features are his large eyes with heavy lids, full lips, rounded nose and a generally rounded profile, and fairly close-cropped hair (Plate 23, 5). Caracalla resembles Septimius in having very curly hair which can look quite tousled on his youthful portraits. His slightly upturned nose, with an indented bridge, and his puffy cheeks (he must always have been somewhat chubby) are his most readily identifiable characteristics (Plate 23, 4).¹⁶

¹³ C. Bosch, *Die kleinasiatischen Münzen der römischen Kaiserzeit*, pt. 2, vol. 1 sec. 1 (Stuttgart, 1935), pp. 47-48 (Caracalla), 50 (Elagabalus).

¹⁴ E.g. *BMCRE* 5, pl. 90, nos. 13 and 20.

¹⁵ Cass. Dio 80.14.4.

¹⁶ See Ludwig Budde, *Jugendbildnisse des Caracalla und Geta*, *Orbis Antiquus* 5 (Munster, 1951), for a lengthy discussion of Caracalla's physiognomy and some interesting illustrations of non-numismatic portraits. Budde's main concern is to separate the unidentified heads of Caracalla and Geta; it is perhaps significant that Elagabalus is never mentioned, let alone suggested, as a contender in the attribution

Unfortunately there are few details of dress and presentation that are peculiar to one rather than the other. In the province of Asia, and perhaps elsewhere, the young Caracalla never wears the radiate crown, though the mature Caracalla and Elagabalus both do so. Elagabalus is usually shown in full bust with cuirass, with or without paludamentum; the frontal bust with aegis and snakes is sometimes found, but it is very rare to find head with bare shoulders, laureate or radiate. Caracalla is only shown with bare shoulders after 205/6 at Rome and very rarely in the period of possible confusion in Asia Minor. He too wears cuirass and paludamentum and is sometimes shown from the front with aegis, or with a loop of his cloak over his shoulder. There are obviously considerable regional variations in the form of the model that was issued to the mints, or that was popular at any given period. In Cilicia, for example, Elagabalus is quite often shown with bare shoulders and laureate crown.

Admittedly it is not always easy to identify the portraits on the Greek Imperials partly because the engravers were not always very skilled, but the necessary familiarity can be acquired, as others who have worked extensively with the coinage have also found. Konrad Kraft had an unerring eye for Elagabalus, and Bosch wrote with great confidence in the matter.¹⁷ The simplest way to acquire this sensitivity is by studying the portraits on series which are extensive and identified with certainty: the Roman coinage is especially helpful, and for the Greek Imperials the plates of Kraft's book¹⁸ are reliable and show a diversity of Asian mints at work. Any ambiguity in the two portraits seems to me accidental rather than deliberate, and the notion that Caracalla and Elagabalus are identical is better forgotten. The family resemblance is

of these heads. H. B. Wiggers in *Das römische Herrscherbild* 31 (Berlin, 1971), pp. 146–52), feels unable to accept any of the non-numismatic portraits of Elagabalus as plausible, and reckons that the destruction of statues was extremely thorough after Elagabalus' *damnatio*.

¹⁷ Bosch (above, n. 13), p. 50, "Die Münzen des Elagabal sind zuweilen von denen des Caracalla nicht leicht zu unterscheiden, da beide Kaiser den gleichen Namen führten. Indessen wo die Porträts einigermaßen deutlich sind, wird die Scheidung immer mit ziemlicher Sicherheit durchzuführen sein."

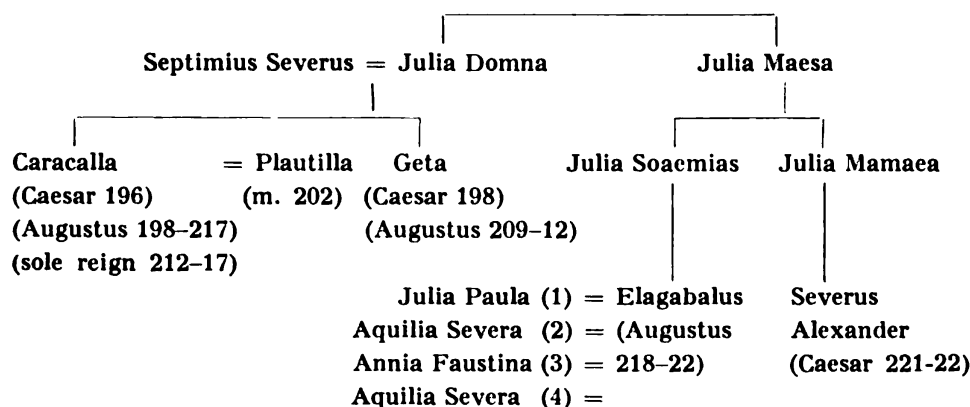
¹⁸ Konrad Kraft, *Das System der kaiserzeitlichen Münzprägung in Kleinasien* (Berlin, 1972).

something of a red herring. In fact there seems to be far greater potential confusion between Elagabalus and his younger cousin, Severus Alexander (Plate, 23, 3): as one might expect, there is a considerable family resemblance between the two Syrian first cousins, but fortunately Alexander refused to become yet another Marcus Aurelius Antoninus (*SHA Sev. Alex.* 9).

The identification of the emperor need not be made on the basis of the portraiture alone; there are usually several other ways to approach the problem, and obviously the more evidence that can be assembled the better. The significance of the information to be derived from a given coin may only become clear when the piece is seen in a wider context, which is not always easily achieved in the absence of a comprehensive catalogue for the Imperials. Comparative material in the *BMC* and *SNG* volumes should always be checked as a matter of course and all the information available should be considered. As I hope to demonstrate here, there are a remarkable number of clues once one is alerted to them.

THE IMPERIAL FAMILY

The first essential is a knowledge of the family tree which connects Caracalla and Elagabalus. This knowledge, combined with other types of information, often helps distinguish between coins of the two rulers.



MAGISTRATES

An obvious clue is given by magistrates' signatures where they are found: if a name occurs on pieces of several members of the appropriate branch of the family, an identification can be made at once. In general, the chances are high that if a piece with unidentified portrait is signed by Marcus Aurelius Andronicus, archon, and there are also pieces for Septimius or Domna or Geta with the same archon, the unidentified emperor is Caracalla. (There may also prove to be more readily identifiable pieces of Caracalla himself, perhaps with some obvious reverse type and with the same signature.)

It is, of course, possible for the same man to recur among the magistrates, and for the same person to sign dies of both the young Caracalla and, 15 or 20 years later, of Elagabalus. Sabine Schultz clearly assumed that this was the case at Magnesia on the Maeander for the four magistrates who signed dies of Julia Maesa and earlier, as she supposed, of Caracalla.¹⁹ It is possible, but improbable. A second or subsequent term of office is usually marked on the Greek Imperials (by TO B', or whatever) because it was a considerable drain on a man's resources to serve as a magistrate more than once and he would not wish his generosity to pass unremarked. It is therefore important to read legends carefully to make sure that apparently similar ones in fact refer to the same person in the same period of office. Fathers and sons (or grandsons) with the same name could have served as magistrates, one for Caracalla and one for Elagabalus, but again this is usually made explicit.²⁰ The son may record the fact that his father had also held office, or else may add *neoteris* after his name. The only instance known to me of father and son appearing in this potentially confusing manner on coins of Caracalla and Elagabalus is at Smyrna, where a strategos named Aelius Apollonius signed dies of the early sole reign of Caracalla,

¹⁹ Schultz (above, n. 2), pp. 23–24 and Appendix. See Harl and Howgego (above, n. 2) for a fuller discussion of magistrates' names.

²⁰ E.g. Domitius Rufus of Sardis, an asiarch and the son of an asiarch, who signed coins of Valerian and Gallienus ΕΠΙ ΔΟΜ ΡΟΥΦΟΥ ΑCΙΑΡΧ ΚΕ ΒΙΟΥ Β ΑCΙΑΡΧ, *BMC* 206, *νΑ* 8262.

and his son or grandson of the same name signed dies for Elagabalus, but with the legend Aelius Apollonius N[eoteros].²¹

The existence of coins for other members of the imperial family can be of assistance, even if they do not bear magistrates' names. Where coins are known for the wives or mother of Elagabalus, one would expect to find pieces for the emperor himself: in the case of Smyrna, there are coins without a magistrate's name for Julia Maesa and Aquilia Severa, so that it would be curious if there were none at all for Elagabalus.²² Similarly, where there are coins for the rest of Septimius' family, there is a greater likelihood of a questionable portrait being Caracalla. Arguing from the *absence* of coins for other members of the imperial family can be rather more dubious: it is safer to assume that a piece must be Elagabalus if there appear to be no coins for Septimius and family, than that it must be Caracalla just because there are no coins for Maesa or any of Elagabalus' wives. Obviously coins for Elagabalus' royal ladies over a period of four years are much rarer than those for members of Caracalla's family over as many as 25. Cerasus in Pontus, for example, has coins for Maesa and Paula but none for Septimius and family, which means that pieces for Caracalla are highly unlikely.²³ Quite a number of Carian mints apparently did not strike after the sole reign of Caracalla, so that it is improbable that an unidentified piece from these cities would prove to be Elagabalus.²⁴

DENOMINATIONS

Another approach is to look at the spread of denominations in conjunction with the coins of other members of the imperial family, if any. After the expansion of the Greek Imperials in the late second and early third centuries, it was usual to issue a range of denominations,

²¹ Aelius Apollonius the elder: Caracalla and Domna, Kraft, pl. 1, 3 and 7. Aelius Apollonius the younger: Elagabalus, Kraft, pl. 2, 13.

²² Julia Maesa and Aquilia Severa, specimens in Oxford; Mionnet 3, p. 246, 1388, and *Suppl.* 6, p. 363, 1815.

²³ Maesa (*vA* 122), Paula (*RG*, p. 76, no. 9), Elagabalus (*vA* 6771 and *BMC* 1); no published pieces for Septimius and family.

²⁴ See Appendix, I.2, 8, 10, 15, 21.

most frequently 25, 30 and 35 mm in diameter, but also larger (40, 45 and even 50 mm) and smaller (22, 20, 18 and 15 mm). If there were several members of the imperial family of the moment, they would be spread across the denominations, often hierarchically, with the *augusti* on the larger and the royal ladies and the Caesar on the smaller denominations. As a consequence, Caracalla rarely appears on the smaller denominations before his sole reign, because his mother, younger brother and (briefly) his wife were all available to fill those places; Caracalla and Septimius usually appear on the 30 mm and larger pieces. In his sole reign, when there were just himself and Julia Domna, smaller denominations with his portrait are much more common, but by then his features are distinctive. Elagabalus' wives, cousin, mother and grandmother were not shown as frequently as the subordinate members of Caracalla's family and, in Asia at least, tended to be given only the larger denomination coins (usually 30 mm), so that small coins (20 mm and below) for Elagabalus are relatively rather more common than for the young Caracalla.

For the same reasons, the larger denominations may also be identifiable as Elagabalus if the emperor appears on the whole range of denominations, whether these are grouped by magistrate's name or by similarity of style; Caracalla is almost always accompanied by one of his relatives. A good example of this is Apamea Phrygiae, where there has been confusion over the attribution of coins signed by the *grammateus* L. Ma . . . Sev²⁵ In fact the coins must belong to Elagabalus because there are examples of the full spectrum of denominations 35, 30, 25, 20 mm—all with similar portraits, and there are no pieces for any other members of the imperial family. Even without a magistrate's name it is possible to define a group by style and treat it in the same way. For instance, Palaiopolis Pisidiae has coins for Septimius and Caracalla Caesar, and then a group of portrait pieces which have been variously attributed, all unsigned. There is sufficient similarity of style for these problematical pieces to belong together and, since they cover the range—35, 27, 20 mm—and there are no coins for empresses or Caesars, to be attributed safely to Elagabalus (Plate 23, 6).²⁶

²⁵ See Appendix, K.6.

²⁶ See Appendix, M.17.

Some cities did not issue coins on a strictly hierarchical system and produced coins of the same denomination for more than one member of the imperial family, sometimes with shared reverse dies. At Ariassus Pisidiae obverses of Caracalla are linked with obverses of his father, mother and brother through common reverse dies, hence allowing no doubt as to his identity.²⁷ Another example can be seen at Metropolis Ioniae, where Caracalla and Domna share a reverse die.²⁸ The phenomenon is not restricted to Caracalla and family: Elagabalus shares reverse dies with his relatives, for instance at Isinda (Plate 23, 8).²⁹ Reverse dies with an undatable legend and type may also be held over from reign to reign, rarely as spectacularly as at Codrula in Pisidia (where the same reverse dies were used again and again from Commodus to Gallienus),³⁰ but sometimes between Macrinus and Elagabalus or between Elagabalus and Severus Alexander. At Sardis a reverse of Macrinus is used again with an obverse of Elagabalus, hence securely identified (Plate 24, 11).³¹ A reverse of Elagabalus is reused with an obverse of Barbia Orbiana, the wife of Severus Alexander, at Carallia Ciliciae,³² and von Aulock was able to attribute an ambiguous obverse to Elagabalus at Seleucia Sidera because the reverse is linked with an obverse of Severus Alexander.³³ It is possible that there are dies held over from Caracalla's sole reign to Elagabalus, but none has come to my attention so far. There would have to be some obvious deterioration of the die for this to be a help rather than a hindrance, since it could otherwise appear to be a reverse of the young Caracalla reused in his sole reign.

TYPES

Reverse types may provide a clue as to attribution, though there is a tendency at most cities to repeat the same standard types from reign

²⁷ *MSPis* 1, 429 = 401 (Septimius), 430 = 406 (Domna), 438 = 466 (Geta).

²⁸ See Appendix, H.7.

²⁹ *MSPis* 1, 818–21 = 829–32 (Maesa).

³⁰ *MSPis* 1, p. 33, and nos. 986 ff.

³¹ Both pieces in Boston.

³² See Appendix, P.7.

³³ See Appendix, M.23.

to reign. There are, however, a fair number of types peculiar to Caracalla which are found quite widely. Obviously any scene involving two or more military imperial figures is likely to show Caracalla with his father and/or brother. A common version shows Caracalla and Geta, togate, as joint consuls clasping hands;³⁴ Caracalla also clasps the hand of his father and co-augustus in the company of Homonoia (e.g. Nicea Bithyniae, *vA* 590). Father and sons may be depicted together, seated on curule chairs or riding in a quadriga.³⁵ Septimius is sometimes recognizably shown, riding in a chariot or on horseback attacking a kneeling captive (Plate 24, 9a).³⁶ It appears that this type, which is very common for all the members of Septimius' family, is never found for Elagabalus.³⁷ An Adventus type with the emperor on horseback peaceably saluting or being saluted is found for Elagabalus, but the warlike stance was not appropriate.³⁸ The other members of Caracalla's family occasionally appear: Julia Domna is identified as IVLI AUG MAT CASTR on coins of Cremna Pisidiae showing her carrying her two young sons (*BMC* 7), and on a reverse of Stratonicea Cariae her bust appears with the legend IOV ΔOM CEB (*vA* 2681). Several reverses of Nicea Bithyniae show Geta with identifying legend (*RG* 490–91). Nicea also struck a series of coins commemorating games called the *Severeia Philadelphia*, and Tarsus held *Severeia Antoniniana*.³⁹

Types particularly associated with Elagabalus are less common. References to the cult of Sol Elagabalus are relatively unusual: the sacred stone is shown on its car on a reverse of Hierapolis Castabala (*vA* 5579), and Sardis recorded the celebration of games called *Elagabalia*

³⁴ E.g. Amaseia in Pontus, *vA* 6708; Hierapolis Castabala, *vA* 5578; Cremna in Pisidia, *MSPis* 2, 1192.

³⁵ Apamea Bithyniae, *RG* 82; Maconia Lydiae, *vA* 3020.

³⁶ Taviu Galatiae, *BMC* 21–22; Iasus Cariae, Kraft, pl. 60, 20, and Laodicea Phrygiae, Kraft, pl. 81, 42, with identifying legend: AV ΚΛ CΕΠ CEOVHPOC ΠΕ.

³⁷ The only example known to me is from Hierapolis Phrygiae (ANS), where the type is reversed from its usual figure riding r. and probably shows Caracalla rather than Elagabalus himself (the captive wears a Parthian cap).

³⁸ E.g. Mopsus Ciliciae, H. von Aulock, "Die Münzprägung der Kilikischen Stadt Mopsos," *AA* 78 (1963), no. 70.

³⁹ Nicea: *RG* 485, showing Caracalla and Geta beside a table bearing a prize crown, and *vA* 7040, with emperor in quadriga. Tarsus: *BMC*, p. xciii.

on its coins (Plate 24, 12).⁴⁰ Helios types are more likely to belong to Elagabalus than to the young Caracalla, though one does find Helios reverses for the sole reign of Caracalla. In places which did not have a major Athena cult, Athena/Minerva types are marginally more frequently found for Elagabalus than for Caracalla; she was the especial patron of Geta, though it is not clear to what extent this preference percolated to the provinces.⁴¹ A piece in the British Museum given to Caracalla in the *Recueil* for Cius Bithyniae (RG 65) is probably Elagabalus, as the *BMC* maintains, because the reverse type is a head of Athena which is otherwise found only for Maesa and Paula (RG 82 and 84). One might suppose that types showing a single figure of an emperor with some city Tyche or with the statue of the local deity must be identified as Elagabalus, as the sole representative of imperial power, but in fact types of this general form are also quite common for Caracalla, even during his joint reign with Septimius.⁴² Elagabalus' relatives rarely appear, though there is a reverse of Mytilene with the bust of Annia Faustina and the legend ANNIA AVPH ΦΑΥΚΤΕΙΝΑ (Waddington 1401).

DATED COINS

Some cities regularly or intermittently dated their coins, though this is not always as straightforward as it might appear, if the base date of the era used is not known. Even so, there may be a sufficient spread of recorded dates for a rough date to be guessed (e.g. Commodus with year 50 allows one to suppose that coins with the year 70 must be Caracalla). Dated coins are especially common in Pontus and Paphlagonia, where virtually all the coins of Caracalla and Elagabalus are dated; Cibyra in Phrygia, Magydus in Pamphylia and several cities in Cilicia also have dated issues.⁴³ A few cities marked regnal years on their

⁴⁰ Sardis: Paris 1285 (prize crown on inscribed base).

⁴¹ There are instances of both Helios and Athena at Sardis, where there are three Helios reverses for Elagabalus (vA 8259 is the only published example) and the type is otherwise never used, and there are Athena reverses only for Geta (Berlin) and Elagabalus (*BMC* 161 and Paris 1261).

⁴² E.g. Smyrna, *Cop* 1386–87.

⁴³ See Appendix.

coins: Alexandria is the great example, but Caesarea and Tyana in Cappadocia and Isinda in Pisidia (Plate 23, 8) used the same system.⁴⁴ There can be no confusion between Caracalla and Elagabalus because Elagabalus' coins bear his own regnal years 1 to 5; Caracalla's coins bear the regnal dates of Septimius. Caracalla did not become Caesar until Septimius' year 6, and the numbering of his regnal year did not recommence when he became sole Augustus.

COUNTERMARKS

Dates occasionally occur as countermarks, though I am not aware of any prior to 218 which would separate Caracalla and Elagabalus; the most useful countermarks are those with identifiable portraits of Septimius and family, which must have been applied before 212. On coins of Apollonis Lydiae there is a countermark with the head of Septimius (Paris 61, *BMC* 22), and there are several examples of "head of Caracalla" or even "Geta" (more likely the mature Caracalla) on coins of Hadrianotherae (*BMC* 7), Pergamum (Oxford), Alabanda (*McClellan* 8442); Smyrna used countermarks with heads of Septimius, Domna and Elagabalus and with the legend CMVP, but these appear to be applied only to very worn flans.⁴⁵ Other less obviously datable countermarks may be helpful if they are known to have been applied for a limited period prior to 218. It seems that the countermarks of Athena and ΘΕΟV were used only on the coins of Septimius and family at Stratonicea Cariae, as is the Nike on coins of Nicea Bithyniae.⁴⁶ Some time before the reign of Elagabalus the city of Timbriada in Pisidia countermarked its own coins with TI; the same countermark was applied to pieces of Prostanna, Tityassus and Verbe which can safely be taken to be coins of Caracalla.⁴⁷

⁴⁴ See Appendix.

⁴⁵ There are several examples in Munich.

⁴⁶ See *BMC* for several examples of the countermarks at Stratonicea and *RG* for those at Nicea.

⁴⁷ See *MSPis* 1 and 2 for several examples at these cities.

CITY TITLE

A rather more common phenomenon and perhaps the most helpful separator of the two emperors is the city title, in particular the neocorate. The neocorate refers to the possession of a temple of the imperial cult in the city, but on behalf of the province. It was highly sought-after honor, even after the relaxation of the rule whereby there could be only one provincial temple per emperor, and cities which had the title were usually keen to display the fact. Caracalla and Elagabalus both bestowed additional honors on the cities of Asia Minor, which makes the coins of the two emperors much easier to identify. The changes are set out in Table 1.

TABLE 1

City Titles: Neocorates

<i>City</i>	<i>Joint Reign, Septimius and Caracalla</i>	<i>Sole Reign Caracalla</i>	<i>Elagabalus</i>
<i>Ephesus</i>	B	Γ	Δ
<i>Smyrna</i>	B	Γ	Γ
<i>Pergamum</i>	B	Γ	Γ
<i>Philadelphia</i>	—	A	A
<i>Miletus</i>	(—)	(—)	B
<i>Cyzicus</i>	A	B	A?
<i>Laodicea</i>	—	A	A
<i>Nicomedia</i>	B	B	Γ
<i>Sardis</i>	B	B	B/Γ
<i>Hierapolis</i>	—	—	A
<i>Tralles</i>	—	A	A

Ephesus is the most obliging: the city was already twice neocorate during Caracalla's joint reign with Septimius, a third neocorate was granted probably ca. 211–12 for Caracalla and Geta, though it was diverted to Artemis by Caracalla after Geta's murder.⁴⁸ Elagabalus granted a fourth neocorate, so that there is a neat division: B = young

⁴⁸ The bibliography on the neocorates of Ephesus is most easily found in Louis Robert's article elucidating the third neocorate in *Rev Phil* 1967.

Caracalla to 211, Γ = sole reign of Caracalla and Δ = Elagabalus. This is particularly valuable because there are never any magistrates' names on the coins of Ephesus.

Smyrna was also twice neocorate during the joint reign of Septimius and Caracalla (the titles had been granted for temples of Tiberius and Hadrian), though for some reason the city did not include this title in its coin legends. A third neocorate must have been granted during the sole reign of Caracalla, since coins of two out of four of the sole-reign magistrates occur with the legend $\Gamma\text{P}\text{IC} / \Gamma \text{NE}\Omega\text{KOP}\Omega\text{N}$.⁴⁹ There was no additional title for Elagabalus, so any ambiguous youthful portraits with the legend $\Gamma\text{NE}\Omega\text{KOP}\Omega\text{N}$ must be Elagabalus and those without the neocorate title must be Caracalla.

Pergamum was given a third neocorate by Caracalla on the occasion of his visit to the city in 214—there is a magnificent series of commemorative coins showing the emperor being received in front of major public buildings in the city.⁵⁰ Again, there was no temple granted for Elagabalus, so $\text{B NE}\Omega\text{KOP}\Omega\text{N}$ accompanies young Caracalla and $\Gamma \text{NE}\Omega\text{KOP}\Omega\text{N}$ accompanies Elagabalus.

Philadelphia was given its one and only neocorate in 212 (*IGR* IV. 1619), so all the coins with the legend $\Phi\text{I}\Lambda\Delta\text{E}\Lambda\Phi\text{E}\Omega\text{N NE}\Omega\text{KOP}\Omega\text{N}$ belong to the mature Caracalla or Elagabalus.

Miletus seems to have acquired a neocorate for Elagabalus, which was counted as the second. The first was presumably for Caligula, though it is not normally mentioned on the coins of the second and early third centuries; the second title was lost with the *damnatio* of Elagabalus. Unfortunately the absence of the second (or any) neocorate from the legend cannot be taken as indicating Caracalla because there seem to be coins of the reign of Elagabalus without the title.⁵¹

⁴⁹ Apollonius and Geminus without neocorates (*Cop* 1426 and 1428), Charidemus and Cretarius with three (*BMC* 403–4, 405 ff.).

⁵⁰ See, for example, *BMC* 324–26.

⁵¹ For the neocorates, see L. Robert, "Le culte de Caligula à Milet et la province d'Asie," *Hellenica* 7 (1949), pp. 206–38. Coins with the neocorates: Paris 1912 (Elagabalus), *Waddington* 1877 (Soaemias), *Sardis* (T. V. Buttrey et al, *Sardis*, mono. 7: *Greek, Roman and Islamic Coins from Sardis* [Cambridge, Mass, 1981]),

Cyzicus is another problematical case. The first neocorate was certainly for Hadrian, and a second is mentioned on the coins of the mature Caracalla in conjunction with a reverse type showing (presumably) the two temples of the imperial cult. However, the coins of Macrinus revert to ΝΕΩΚΟΡΩΝ without a number, those of Severus Alexander again read ΔΙC ΝΕΩΚΟΡΩΝ, after which there is a return to the simple ΝΕΩΚΟΡΩΝ until Gallienus (again ΔΙC). Consequently the neocorate is not a reliable separator of Caracalla and Elagabalus in this instance.⁵²

Laodicea had a somewhat checkered career. The original neocorate was given for Commodus but suppressed after his death; the title was again bestowed by Caracalla (by 211/12, if the date † ΠΗ = 88 has been read correctly on coins which refer to the title), so that coins with the title and an ambiguous youthful portrait must be Elagabalus.⁵³

Nicomedia, like Ephesus, was granted an additional neocorate while Elagabalus was wintering in the city on his way from Syria to Rome at the beginning of his reign. This was its third neocorate, so coins with Β are Caracalla (joint and sole reign) and with Γ are Elagabalus.

Sardis is more complicated because it too was given a third neocorate by Elagabalus while he was wintering in Nicomedia, but after the city had struck coins with the head of Elagabalus and the legend Β ΝΕΩΚΟΡΩΝ. This has caused some confusion in catalogues and collections: even Barclay Head, in the introduction to *BMCLydia* (p. cvii), says "From the time of Elagabalus Sardes calls itself on its coins indiscriminately δῖς or τρις νεωκόρος." He then goes on to speculate about the nature of the neocorate, which he assumes was not imperial; in fact the situation was perfectly regular and the third neocorate was

no. 106 (Maesa). Coins without the neocorate: Kraft, pl. 13, 30, *Waddington* 1875 (Elagabalus), Oxford (Maesa), *Waddington* 1876 (S. Alex. Caesar).

⁵² See T. Reinach, "Sur l'époque et le nombre des neocorats de Cyzique," *RN* 1890, pp. 244–52, largely concerned with sorting out some fanciful nineteenth-century notions. Reinach does not discuss the variable neocorates after Caracalla.

⁵³ See *Laodicée du Lycos—Le Nymphée*, ed. Jean des Gagniers et al. (Quebec/Paris, 1969), pp. 281 ff. (Louis Robert on the inscriptions from the site).

simply dropped after Elagabalus' *damnatio*. Fortunately most of the Sardis issues are signed by magistrates, which allows them to be grouped neatly: Vettenianus, Fronto and Admetus signed issues of the young Caracalla, Mithres and Rufus signed issues of the sole reign, and Claudianus signed the first issue for Elagabalus, all with Β ΝΕΩΚΟΡΩΝ. In 221/2 there was another issue, signed by the archon Hermophilus and claiming the third neocorate, which can therefore be given unambiguously to Elagabalus. Some of the smaller pieces may be muddled because there are coins of both Caracalla and Elagabalus with no magistrate's name and with Β ΝΕΩΚΟΡΩΝ, but they can be distinguished by portrait and reverse type.⁵⁴

Hierapolis in Phrygia has also been a source of some confusion. It has been thought that the neocorate title was given by Caracalla when he was visiting his old tutor in the city on his journey across Asia Minor in 214/15, and hence coins with the title are given to both Caracalla and Elagabalus in all the catalogues.⁵⁵ In fact, as von Papen pointed out long ago,⁵⁶ the neocorate was for Elagabalus; a vast issue was struck for Elagabalus, plus two of his wives, and for Severus Alexander Caesar, perhaps in celebration of the new honor. As elsewhere, the title was lost after the emperor's death.

Tralles was yet another recipient of a neocorate during Caracalla's sole reign, so that coins with youthful portrait and the title belong to Elagabalus. The title was omitted on some of the smallest pieces (less than 20 mm diameter) of Maesa, Severus Alexander Caesar and (to judge by portrait) Elagabalus, but this affects only the most insignificant coins.⁵⁷

There are doubtless similar devices for dating coins in other parts of the Roman world, using official or local titles. An example is the in-

⁵⁴ See Appendix, J.26.

⁵⁵ See L. Weber, "Zur Münzprägung des phrygischen Hierapolis," *Χάριτες* (1911), pp. 480–90, and "The coins of Hierapolis in Phrygia," *NC* 1913, pp. 1–30, and 133–61, the standard reference cited in subsequent catalogues.

⁵⁶ "Die Spiele von Hierapolis," *ZfN* 26 (1908), pp. 161–82. I hope to rehabilitate von Papen and set out the neocorate issues in a forthcoming *NC*.

⁵⁷ See K. Buresch, "Zur lydischen Epigraphik und Geographie," *AM* (1894), pp. 109–10, 113–15. *CIG* 2926 gives Tralles its full panoply of titles.

clusion of the letters A M K on coins of Anazarbus and Tarsus from Caracalla's sole reign onwards, the letters standing for the self-adopted title of *Πρώτης Μεγίστης Καλλίστης*.⁵⁸

DIE LINKAGE

The fact that the coins of these important cities in the province of Asia can be attributed reasonably securely to the right emperor can have wider implications, because of the network of die linkage in Asia Minor in this period.⁵⁹ Dies which cannot be identified on their own may be linked through a common obverse to datable reverses of another city. An otherwise ambiguous piece of Myrina (*vA* 7707) can be identified as Elagabalus because the same obverse was used for Smyrna and Temnus with reverses that clearly belong to the reign of Elagabalus.⁶⁰ Similarly, we can say with total assurance that a coin of Amblada (*vA* 4903) must be Caracalla because it shares an obverse die with a group of Lydian and Ionian cities, all obviously Caracalla (Plate 24, 9).⁶¹ There are dozens of similar examples, as can be seen from Kraft's plates.

The "workshops" identified by Kraft did not serve completely static groups of cities, so that it may be possible to identify which emperor is involved from the composition of a group at a particular moment. After about 211–12 separate workshops seem to have been operating for the hinterlands of Ephesus, Smyrna, Sardis and Pergamum, so that it is only prior to that date that any two of these major cities would have shared an obverse die, i.e. only for the young Caracalla and never for Elagabalus. Such is the case in the example cited at the

⁵⁸ See Appendix, P.4 and P.22.

⁵⁹ For the only substantial discussion to date, see Kraft (above, n. 18). Obverse dies were shared, sometimes by as many as six or eight cities, and coins appear to have been produced at a small number of ateliers which served the majority of the cities of Asia Minor in the third century.

⁶⁰ Temnus is the decisive link because the magistrate Herodes signed a reverse of Maesa (*BMC* 33) as well as *vA* 1678 (Elagabalus); see Kraft, pl. 2, 13 a-c.

⁶¹ See Kraft, pl. 70, 59. The clues are that both Ephesus and Sardis are only twice neocorate, and the magistrate for the Daldis piece (Metrodorus) also signed dies for Septimius (*vA* 2934).

end of the last paragraph: Sardis and Ephesus would only be found sharing an obverse die before 211, and belonged to independent groups by the reign of Elagabalus. Amblada in Pisidia, as might be expected, usually drew its dies from a neighboring workshop and used Ionian dies only in the early years of the third century.⁶² Another example of changing group membership can be seen in Kraft, pl. 75, 9. Here a single obverse die served Philadelphia, Attuda, Tabae, Trapezopolis, Eriza and Cibyra; in fact there are all kinds of clues as to the identity of the emperor (magistrates' names, reverse type, date), but if these were ignored it would still be possible to assign the group to Caracalla because of the inclusion of Philadelphia in the network of die linkage. Although Philadelphia lay in the easternmost part of Lydia close to Phrygia, the city drew dies from a workshop serving Phrygia and Caria only in the first decade of the third century; by the sole reign of Caracalla the city had switched to Kraft's "Sardis" workshop (Kraft, pl. 29), which also supplied dies for Elagabalus (Kraft, pl. 30). However, I suspect that clues from workshop membership are only helpful to the *cognoscenti* who have learned to find their way round Kraft's plates, in which case they have probably devised their own methods of recognizing Caracalla and Elagabalus.

STYLE

Even where there are no die links, stylistic similarities may be useful, and it may be possible to pin down a piece because of a distinctive engraver whose output includes a datable piece for another city. There may be features of an unidentified portrait which tie in with similar pieces elsewhere: the way that the ribbons of the wreath fall to the shoulders, the treatment of the drapery of the bust, the run of the legend—whether it completely encircles the bust, or starts very low on the left-hand side, or splits words like AN/TΩNEINOC—the use of a frontal-view model In the case of Samos, for instance, there are very few actual die links with other cities for Caracalla or Elagaba-

⁶² See *MSPis* 1 and A. Johnston, "The Intermittent Imperials: The Coinages of Lycia, Lycaonia, and Pisidia," review-article, *NC* 1980, p. 206, for additional links with Ionia.

lus, but some of the dies resemble those of Ephesus so closely that they must have been cut by the same engraver and hence can be given, via the Ephesian pieces, to the appropriate emperor with certainty.⁶³

An obvious example of an extremely distinctive engraver whose dies were used at several cities, though there are apparently no links, can be seen at Cibyra (*vA* 3742), Isinda (*vA* 8595), Olbasa (*vA* 5126), and Palaipolis (*MSPis* 1, 1100-1107) (Plate 23, 6-7). The coins of the first two are dated by era or regnal year, which makes the identification of Elagabalus certain. It may be worthwhile pursuing a distinctive engraver into adjacent reigns: if there are strong similarities to coins of Macrinus or Severus Alexander, the chances are that the questionable pieces belong to Elagabalus. The Cibyra/Isinda engraver began with dies for Macrinus and Diadumenian and worked in his idiosyncratic style until at least 225.⁶⁴ A more typical, and less dramatic, example is to be seen at Smyrna (*vA* 2224-25), where the same engraver clearly cut the obverse dies for both Elagabalus and Severus Alexander. The same technique applies to other contemporary members of the imperial family, especially Julia Domna and Geta. Compare, for instance, the portraits of Caracalla and Geta at Creteia-Flaviopolis (*vA* 523 and 524), which clearly come from the same hand. At Prusias at Hypium the style of *vA* 7162-63 closely resembles that of the Plautilla piece, *vA* 7164, and consequently the portrait must be Caracalla. Similarly a single engraver with an easily recognizable style cut obverses for all the members of Septimius' family at Prostanna; von Aulock gives *MSPis* 2, 1802 = 1807 to Elagabalus, though with some misgivings, whereas it should belong with the other pieces of the same style under Caracalla (Plate 24, 10).⁶⁵

PHYSICAL FEATURES

One can rarely tell much from fabric in the Greek Imperial coinages, many of which must have been struck on reused flans, but there may be some characteristic variety of flan, or pieces struck for a while with

⁶³ See Appendix, H. 13.

⁶⁴ Kraft (p. 81) identifies him with the "Cibyra" workshop.

⁶⁵ See Appendix, M. 21.

very high relief, which could provide a clue as to attribution. Die positions are very rarely recorded for the Imperials, but from the material that I have been able to gather it appears that there are often consistent patterns within reigns, and the patterns may change between reigns. Happily one is rarely reduced to such desperate measures as the sole criterion for identification, though these considerations might provide additional confirmation of an identification.

The confusion between Caracalla and Elagabalus has been greatly exaggerated, presumably because the notion of their inseparability has been too easily accepted. In fact, very few coins should elude identification after consideration of the numerous criteria set forth here; if uncertainty still remains, it should be clearly stated. Various plans are under way for tackling the complexity of the Greek Imperials by means of computerized catalogues, so that it is imperative to put the material into good order now, before the errors of the past are multiplied and fossilized in computer memories. My concern is not simply for order, *per se*. The reign of Septimius is the period of the greatest expansion of the local issues in Asia Minor, with regard both to the number of cities striking and to the variety of types and denominations struck. Our understanding of the whole phenomenon of the Greek Imperials must be affected by our understanding of this crucial period, but we cannot hope to make any real progress as long as a substantial part of the evidence is misattributed or left with an uncertain identification.

APPENDIX: CARACALLA AND ELAGABALUS IN ASIA MINOR

The Appendix is intended (a) to assist in the identification of coins of Caracalla and Elagabalus and (b) to correct errors in published catalogues (mainly *BMC* and *SNG*; earlier catalogues such as Mionnet have been ignored because of the impossibility of checking many of the pieces mentioned). If there is no remark to the contrary, the information in the published catalogues seems reliable; I have not attempted to seek out errors listed under any emperors besides Caracalla and Elagabalus. All the cities which appear to have struck coins for Caracalla and/or Elagabalus, as far as can be judged from published

material, have been listed; for Lydia, and to a lesser extent Ionia and Phrygia, I have supplemented this information with my own notes from visits to the cabinets of Berlin, Vienna, Munich, Winterthur, Paris, Oxford, Boston and New York. There are over 200 cities in Asia Minor striking for Caracalla, Elagabalus or both and coverage elsewhere is inevitably uneven; from my experience with the coins of Sardis, I would expect that only a third or a half of the surviving types are represented in published collections. The list should provide a starting point.⁶⁶ Where coins are known for other members of the appropriate family, but not for Caracalla or Elagabalus, I have included the information and marked the city as perhaps striking for C. or E. (indicated by brackets, [C.] and [E.]), since there is a good chance that coins exist but have not yet been published. Where possible, the simplest method of identification is specified (magistrates' names, titles, die links); reasons for the attributions of potentially ambiguous pieces are also given in many cases. In three or four instances, where there has been much confusion, it seemed worthwhile to list all the known dies with my proposed identification.

The following abbreviations are used:

C., Caracalla; E. Elagabalus;	= denotes "same die as";
err., erroneously; corr., correctly;	→ denotes "correct to."

A. PONTUS

Most issues dated, hence no problems in identification.

B. PAPHLAGONIA

Most issues dated.

⁶⁶ Since this appendix was compiled the index to *vA* has appeared, which also lists cities striking for C. and E., including unpublished collections. The index incorporates many errors carried over from old inventories, as I found when checking it in Berlin, Vienna and Paris, and should be used with caution; I have not been able to check the smaller European or the American collections for pieces alleged in the index. Discrepancies between my list and the index have not been individually noted: corrections are implicit for the major collections which I have seen.

C. BITHYNIA

All issues undated. There is some confusion in the catalogues.

1. *Apamea*:

C. and E. *McClean* 7446 (err. E.) = M. Aurelius (*RG* 52).

2. *Bithynium*:

- C. (a) 30 mm AV K M AV|ANTΩNINO|C (*νA* 302, 304, *RG* 44–45);
 (b) 27 mm AVT K M AVP|ANTΩNINOC (*νA* 310, *RG* 41–43);
 (c) 27 mm AVT K M AVPHΛ|IOC ANTΩNINOC (*νA* 303, *RG* 47, *BMC* 10);
 (d) 23 mm ... ANTΩNINOC AVΓ (*RG* 46°).
 E. (a) 30 mm M|AVPH A|NTΩNINOC AVΓ, bust l., with shield and spear (*νA* 315–16, 318–19);
 (b) 30 mm M AV|PH ANT|ΩNINOC AVΓOV, similar (*νA* 317);
 (c) 27 mm M AVPH ANTΩNINOC AVΓOV, frontal view (*RG* 52–56, 58; *Weber* 4840, E. in heading, C. in text l);
 (d) 25 mm M AVPH ANTΩN|INOC AVΓOV (*νA* 301, 306–9, all err. C.; *νA* 320);
 (e) 25 mm M AVPH ANTΩNINOC AVΓOV, bust l., with sceptre over shoulder, r. hand raised (*νA* 305, err. C.; *νA* 321, C. or E. ?; *RG* 40, err. C.);
 (f) 23 mm M AVP ANT|ΩNINOC AVΓ, head laur. (*RG* 39, err. C.; *RG* 57; *Cop.* 341, err. C.; *BMC* 13);
 (g) 18 mm M AVP ANT|ΩNINOC AV (*νA* 6927, err. C.).
 Several issues for Paula and Maesa.

2a. *Caesarea Germanica*:

C. and E.

3. *Calchedon*:

C. and E. Excellent portraits, all specimens correct in *RG*, etc.

4. *Cius:*

C. and E. *RG* 78 (err. E.) = C. Caesar (*RG* 63); *RG* 79 (err. E.), prob. C. (cf. Geta, *RG* 73); *RG* 65 (err. C.) = *BMC* 42 (corr. E., cf. Maesa, *RG* 84).

Athena reverse types prob. limited to E. and family.

5. *Creteia-Flaviopolis:*

C. and E., all specimens correct in *RG*, etc.

6. *Heracleia Pontica:*

C. and ?E. *RG* notes "Il est possible qu'un certain nombre des pièces classées à Caracalla avec l'effigie imberbe, soient d'Elagabale," though none illustrated in *RG* appears to be E. Issues for Maesa and Paula, so E. probable; *vA* 384 could be E.

7. *Juliopolis:*

C. and E. Note that *RG* 25 (ascribed to C. at Juliopolis) is actually Hierapolis Phrygiae and E. (see Kraft, pl. 116, 24).

8. *Nicea:*

C. and E. Some of the pieces attributed to C. with obv. legend M AVP ANTΩNINOC may belong to E., e.g. *RG* 475.

9. *Nicomedia:*

C. and E. Distinguish by neocorates (see p. 115). *RG* 244 (err. C., only specimen without ΔIC NEΩKOPΩN) = Commodus (?*RG* 153 obv.).

10. *Prusa ad Olypium:*

C. and E. *RG* 96, 98, 105 prob. E.; *vA* 7154 perhaps C. Omission of AVT KAI may indicate E.

11. *Prusias ad Hypium:*

C. and E. *vA* 7162–63 corr. C., cf. Plautilla, *vA* 7164.

12. *Tium:*

C. and E. Die links with Bithynium, same corrections apply as that city — M AVP ANTΩNINOC always indicates E.

D. MYSIA

Larger denominations signed by magistrates at all cities except Apollonia ad Rhyndacum, Lampsacus and Parium. References to von Fritze, *Die Antike Münzen Mysiens* (Berlin, 1913).

1. *Adramyleum*:
C. and E. Von Fritze corrects *BMC* 19 (err. C.).
2. *Apollonia ad Rhyndacum*:
C. and E. Von Fritze corrects attributions to Apollonia Cariae.
3. *Atlaea*:
C. and E.
4. *Cyzicus*:
C. and ?E. Neocorates confusing (see p. 115) and puzzling pieces unsigned. Issues for Macrinus and for young S. Alex., so E. not impossible, but *vA* 1280 (E.) = *Cop* 130 (E.) = *BMC* 254 (C., probably corr.).
5. *Hadriania*:
C. and E.
6. *Hadrianoi*:
C.
7. *Hadrianothrae*:
C. Gap in issues until Philip.
8. *Lampsacus*:
C. and ?E. Kraft, pl. 42, 24, perhaps not Lampsacus, though certainly E.
9. *Miletopolis*:
C. and E. Magistrates: Sotericus (C.), Philippus (E.).
10. *Parium*:
C. and ?E.
11. *Pergamum*:
C. and E. Distinguish by neocorates (see p. 114) and magistrates.
12. *Perperene*:
C. and E.
13. *Pitane*:
[C.] and [E.]. Issues for Septimius and Geta, and for Aquilia Severa, but none published for C. or E.
14. *Poimanenon*:
C. Caesar.

E. TROAS

1. *Abydus*:
C. *Cop* 61 ("C. or E.") = C. (cf. Kraft, pl. 57, 45). Magistrates.
2. *Alexandria Troas*:
C. and E. Distinguish by reverse legends: COL AVG TROAD = young and early mature C., COL ALEX AVG = mature C. and E. *McClean* 7773, *BMC* 81, 108 (err. C.); *Cop* 148–54 (err. E.).
3. *Antandrus*:
Uncertain. *Cop* 222 listed as C. but ?M. Aurelius as Ramus cat. Issues for Septimius and J. Paula.
4. *Dardanus*:
C. only, no issues after 209 until S. Alex.
5. *Gargara*:
C. (Kraft, pl. 66, 21 b = Adramyteum). Magistrates.
6. *Ilium*:
Cop 432–36 (err. E.), *BMC* 85 (C.) = *Cop* 434 (err. E). *Waddington* 1183 ("MAMIA MAICA") is garbled and belongs with S. Alex. Augustus.
7. *Pionia*:
[C.] Coins for Septimius, Domna and Geta.
8. *Scepsis*:
C.

F. AEOLIS

Larger denominations signed by magistrates at all cities.

1. *Aegae*:
C. *Waddington* 1268 (err. E.) = *BMC* 27 (corr. C.).
2. *Cyme*:
C., sole reign, and E. Coins for Annia Faustina and S. Alex. Caesar.
3. *Elaea*:
C. Coins for Maesa only with S. Alex. Augustus.

4. *Myrina*:

C. and E. C. (Kraft, pl. 40, 7); E. (Kraft, pl. 2, 13).

5. *Temnus*:

[C.] and E. Coins for Geta (Kraft, pl. 74, 3). E. (Kraft, pl. 2, 13).

G. LESBOS

Larger denominations signed by magistrates at all cities.

1. *Methymna*:

C.

2. *Mytilene*:

C. and E. BMC 219 confirmed as E. because obv. link with rev. type of Annia Faustina (BM).

3. *Pordosilene*:

C.

H. IONIA

Larger denominations signed by magistrates at all cities except Ephesus, Metropolis and Samos. All cities served by "Ephesus" or "Smyrna" workshop after ca. 211.

1. *Clazomenae*:

C.

2. *Colophon*:

C. and E. Milne 197 (err. C.; magistrate, Apollodotus) = E.

3. *Ephesus*:

C. and E. Distinguish by neocorates (see pp. 113-14). Note νA 1898 reads ΔIC not $TPIC$. Several of the larger denomination reverses without neocorate and with legends $IEPA AΠHMH$ or $ΠΡΩΤΩΝ ACIAC$, but obv. dies also used with neocorate reverses which permits certain attribution (C. and E.). Smallest denominations also lack neocorate, but all for C.'s sole reign (bearded portrait) or E. (corr. in *Cop.*). Large issue for E. with all his wives, mother and cousin.

4. *Erythrae*:

[C.] and E. Issues for Septimius, Domna and Geta but no published C. E. (Kraft, pl. 2, 14; same magistrate for Maesa and Paula).

5. *Lebedus*:

C. and E. BMC 19 (err. M. Aurelius) = E. (Kraft, pl. 13, 33).

6. *Magnesia*:

C. and E. See S. Schultz, *Die Münzprägung von Magnesia am Mäander in der römischen Kaiserzeit* (Berlin, 1975), for a corpus; almost all the coins of E. are attributed to C. Some of the attributions are difficult to check because the text is misaligned in places and the plates do not always correspond to the numbering of the text. References here to Schultz's *Caracalla* obv. die numbers V1–20), unless noted as E. in her catalogue (E.V1–4).

C. joint reign, (corr. C. in Schultz).

V1. Magistrate Onesimus also for Septimius, Schultz 142;

V2. Homonoia with Ephesus only for C. (Schultz 159–60) and Geta (213, 215);

V11. Bearded portrait, cf. Geta V4.

C. sole reign, (corr. C. in Schultz).

V4. Bearded portrait, cf. "Ephesus" workshop, Kraft, pl. 11;

V8. Magistrate Bassus also for Domna, Schultz 153;

V10. Bearded portrait, cf. "Ephesus" workshop, Kraft, pl. 11;

V12. Obv. die = *νA* 1899, Ephesus TPIC NEΩKOPΩN;

V12A. Bearded portrait;

V17. Bearded portrait, cf. "Ephesus" workshop, Kraft, pl. 11;

V18. Obv. die = *Cop* 425, Ephesus TPIC NEΩKOPΩN;

V19. Bearded portrait, cf. "Ephesus" workshop, Kraft, pl. 11;

V20. similar.

E. (err. C. in Schultz; V3, 6–7 corrected by Harl, *ANSMN* 26).

V3. Magistrates also signed dies of Maesa: Philoumenes (Schultz 232), Secundus (Schultz 235), Hyllus (Schultz 229); *McClean* 8191 (err. C.);

- V6. Same magistrates as V3; V6A appears to be same die as V6; V6A and V6B share magistrates with V3 and V6, so must be E.; *BMC* 59, 62 (err. C.), *Hunter* 15 (err. C);
- V7. Magistrate Secundus, as V3 and V6; *BMC* 60 (err. C.);
- V9. Portrait;
- V10A. Portrait, legend runs 360° around, cf. S. Alex. V2.
- E. (corr. E. in Schultz).
- EV1. Portrait, cf. V9;
- EV2. Similar; possibly same die as "C.," V16?;
- EV3. Style, cf. S. Alex. Caesar, V12;
- EV4. Kraft, pl. 13, 33, obv. = Lebedus.
- Uncertain (C. in Schultz).
- V5. Illustration too poor to judge, wrong rev. illustrated;
- V13. Possibly E., cf. V7;
- V14. and 15 Possibly E. Share rev. die so must both belong to same emperor;
- V16. Probably E., cf. V9; *McClellan* 8190 (not in Schultz) given to C.;
- V16A. Probably E., cf. EV3.

7. *Metropolis*:

C. and E. *Fitz* 4527 corr. C. (Kraft, pl. 76, 17, obv. linked with Hypaepa, which drew dies from "Ephesus" only before 211); Kraft pl. 76, 18 corr. C. because rev. die link with J. Domna, Kraft, pl. 76, 19; *Cop* 912 apparently corr. E. (portrait).

8. *Miletus*:

C. and E. B NEΩ KOPΩN indicates E., but several E. without neocorate (Paris, Kraft, pl. 13, 30, and *Waddington* 1875, as well as Maesa, Oxford, and S. Alex. Caesar, *Waddington* 1876), identifiable by portrait only.

9. *Phocaea*:

C.

10. *Priene*:

[C.] Issue for Septimius and Geta, none published for C.

11. *Smyrna:*

C. and E. Distinguish by neocorates (see p. 114). One small issue for E. plus Maesa and Aquilia. *Fitz* 4584 probably not Smyrna and more likely E. than C.

12. *Teos:*

[C.] Issues for Septimius, Domna and Geta, but no C. published.

13. *Samos:*

C. and E. Distinguish by reference to Ephesus—close stylistic similarities. *νA* 2308 probably E. (cf. Kraft, pl. 13, 27). Issues for Maesa, Paula and Soaemias.

I. CARIA

1. *Alabanda:*

C. Apparently no issues after 217 until Maximus.

2. *Alinda:*

C. Apparently no issues after ca. 205. Magistrate.

3. *Antioch ad Maeandrum:*

C. Caesar.

4. *Aphrodisias:*

C. and E. Magistrates.

5. *Apollonia Salbake:*

C. Magistrates. See L. Robert, *Le Carie* 2 (Paris, 1954), pp. 263-64, for a corpus.

6. *Attuda:*

C. Magistrates.

7. *Bargylia:*

C.

8. *Ceramus:*

C. Magistrates. ?No subsequent issues.

9. *Cidramus:*

E. See Robert, *Carie* 2, pp. 344-45, for a corpus; *νA* 2589 corr. E. *pace* Robert.

10. *Cnidus*:
C. ?No subsequent issues.
11. *Euromus*:
[C.] Issue for Septimius (Kraft, pl. 59, 2) but no C. published.
12. *Halicarnassus*:
C. Magistrates. No additional issues until Maximinus.
13. *Harpasa*:
C. Distinguish by portrait.
14. *Heraclea Salbace*:
C. Perhaps only sole reign.
15. *Iasus*:
C. Kraft, pl., 60, 20, rev. type recognizably Septimius.
16. *Mylasa*:
C. and E. For a corpus, see A. Akarca, *Les monnaies grecques de Mylasa* (Paris, 1959).
17. *Myndus*:
[C.] Issues for Septimius and Domna.
18. *Sebastopolis*:
[C.] See L. Robert, *Études Anatoliennes* (Paris, 1937), pp. 356–62, issues for Domna and Geta.
19. *Stratonicea*:
C. Magistrates. Countermarks of Athena and ΘΕΟV prior to 218.
20. *Tabae*:
C. Magistrates. E., Paris; *νΑ*, Index → Saloninus.
21. *Trapezopolis*:
C. Magistrates. ?No issues post 211.
22. *Cos*:
C. Magistrate. *νΑ* 2768 (portrait). ?No additional issues until Philip.

J. LYDIA

Larger denominations signed by magistrates at most cities.

1. *Acrasus*:
C.

2. *Aninetus*:

[C.] Issues for Domna and Plautilla but no C. published.

3. *Apollonhieron*:

C.

4. *Apollonis*:

C. Countermark with head of Septimius.

5. *Attalaea*:

C. and E. *Fitz* 4847 (err. E.) and Munich (Kraft, pl. 67, 39) identified as C. through obv. link with Acrasus and Silandus. *Waddington* 4882 (err. C.) similar to Kraft, pl. 42, 26 (E.).

6. *Bagis*:

C. *Waddington* 4899, Gaius Askionos (err. E.). Several (probably sole reign) with rev. legend KAICAPEΩN BAΓHNΩN can be identified by bearded portrait. No issues until Gordian.

7. *Blaundus*:

C. *νA* 2929 (err. E) with magistrate Alexander → C. Explanatory note in *νA* is wrong, and *BMC* 81 and *McClellan* 8648 are right in their attribution: coin in Berlin (4/1922) for Caracalla and Geta signed by Alexander, also APX A TO B.

8. *Cilbiani Inferiores*:

C. and E. Some confusion in catalogues; several larger denomination pieces without magistrate's name. *BMC* 18 is correctly C. but the rev. legend is wrongly restored as M. Aurelius Apollonides Philosebastos, etc., and should read ΕΠΙ ΤΡΥΦΩΝΟC ΔΙC ΦΙΛΟ CΕΒ ΑΡΧΟΝΤΟC, etc.; the obv. die = *νA* 2991 (also Tryphon). *Hunter* 2 should also be restored as Tryphon and is corr. C. *BMC* 19 (err. E.) = same obv. as *Waddington* 4949 (with archon Ploutianus, who signed rev. of Domna, *BMC* 15), which is linked with Hypaepa and Maeonia (Kraft, pl. 72, 73), where the magistrates are known for family of Septimius. *BMC* 17 (err. C.), same magistrate as *νA* 2995 (corr. E.) and same obv. die as Kraft, pl. 13, 32. Note that there is also an issue of large pieces for C., sole reign, with legend ΝΕΙΚΑΕΩΝ ΚΙΛΒΙΑΝΩΝ (*νA* 2992, *BMC* 16, Kraft, pl. 29, 11).

9. *Cilbiani Superiores*:
C. Issues ca. 202 (Plautilla) and sole reign; no subsequent issues.
10. *Daldis*:
C. No additional issues until Gordian.
11. *Dioshieron*:
C. and E. *BMC* 22 corr. E. because linked to Ephesus, *δ' νεωκόρων* (Kraft, pl. 12, 26).
12. *Germe*:
C. and E.
13. *Gordus-Julia*:
C. and E. *Cop* 161, no magistrate (corr. C., sole reign). Magistrate Aur. Julianus (APX A TO B) for E. (Paris, Berlin). No magistrate, radiate bust, *Fitz* 4858 (corr. E.) linked to Sardis (Kraft, pl. 30, 17).
14. *Hermocapelia*:
C. No additional issues until Trebonianus Gallus.
15. *Hierocaesarea*:
[C.] Issue for Domna (*Waddington* 5010).
16. *Hypaepa*:
C. and E. Many C. with magistrates' signatures which are also known for Septimius and family. Magistrates Attalus + Apollonius for C. (Kraft, pl. 29, 6, obv. die link with Philadelphia and Sardis, both identifiable through their magistrates as C.). Several without magistrate can be identified through obv. die links: Kraft, pl. 72, 68, Kraft, pl. 76, 17, and Kraft, pl. 62, 7 (see remarks under Metropolis Ioniae). *νΑ* 2968 corr. C. (cf. Kraft, pl. 72, 68); *BMC* 44 corr. C. (cf. Kraft, pl. 62, 5). Issues signed Attalus + Charixenus, Charixenus + Dionysios, Charixenus or Dionysios belong to E.: *BMC* 41 (err. C.), *BMC* 42 (err. C.), *BMC* 52–56 (corr. E.). Note that Kraft, pl. 30, 12b, is Hypaepa also, not Sardis.
17. *Hyrcaenis*:
[C.] Issues for Septimius, Geta and Plautilla, but none for C. published. No additional issues until Philip.
18. *Maeonia*:
C.

19. *Magnesia ad Sipylum*:
C.
20. *Mastaura*:
C. No magistrates. *BMC* 11 uncertain, possibly C.
21. *Mostene*:
[C.] Issue for Domna (Kraft, pl. 76, 13). No additional issues until Gallienus.
22. *Nysa*:
C. and E. Theotimus and Aristander signed dies of Maesa and Soaemias, which confirms *BMC* 51 and *Cop* 321 as corr. E.
23. *Philadelphia*:
C. and E. Distinguish by neocorate (see p. 114) and magistrates.
25. *Saitta*:
C. and E. Magistrate Sos. Charikles signed issues of C.: *Waddington* 5185 (err. E.), *BMC* 50–51 (err. E.), obv. linked with Sardis with magistrate Vettenianus (Kraft, pl. 70, 58). Attalianus signed sole reign issue (*vA* 3099, 8249, both corr. C.); Attina signed issue for Paula and E., and Fab. Gaius for E. (portrait).
25. *Sala*:
C. and E. Magistrates Diophantes (E., *vA* 3119–20) and Lucius Corn . . . (probably E., range of denominations 35, 30, 25 mm and apparent die link of specimen in Paris with *vA* 3119).
26. *Sardis*:
C. and E. Distinguish by neocorates and magistrates (see pp. 115–16). Vettenianus, Fronto, Admetus, Mithres and Rufus signed dies of C., Claudianus (Β ΝΕΩΚΟΡΩΝ) and Hermophilus (Γ ΝΕΩΚΟΡΩΝ) signed for E. *BMC* 159 (err. C.), Weber 6912 (err. C.), both Claudianus. At least 8 obv. dies of 25 mm size for E. with Β ΝΕΩΚΟΡΩΝ rev., of which 5 are radiate (e.g. *BMC* 160 and 161, err. C.); remainder identified by reverse link (die of Macrinus held over), rev. type (Athena) and portrait. *vA* 8257 (err. C.).
27. *Silandus*:
C. Links with Acrasus and Attalaea (Kraft, pl. 67, 39, and pl. 70, 56).

28. *Stratonicaea*:

E. Beware of confusion with Stratonicaea Cariae. Issue signed ΦΙΛΟΧΕΝΟΝ ΑΡΤΕΜΟΝΟΝ for Paula and E. (*BMC* 13).

29. *Tabala*:

C. *Fitz* 4887 and *BMC* 12-14 probably sole reign.

30. *Thyatira*:

C. and E. Main problem with the unsigned pieces with ΑΝΤΩΝΕΙΝΟΝ or similar as obv. legend.

C. (a) 25 mm AVT K M AVP CEVH | POC ΑΝΤΩΝΙΝ, head laur. (*BMC* 103);

(b) 25 mm AVT K M ANT | ΩΝΕΙΝΟΝ, bust cuir. (*vA* 3227)

(c) 20 mm ΑΝΤΩ|ΝΕΙΝΟΝ, bust laur., cuir., draped (*vA* 3228);

(d) 18 mm ΑΝΤΩΝ|ΕΙΝΟΝ, similar (*vA* 3229);

(e) 16 mm ΑΝΤΩ|ΝΕΙΝΟΝ, similar (*Waddington* 5371).

E. Issue signed Stratoneikianos for E. (*BMC* 112), Annia Faustina and J. Soaemias; single published piece signed ΚΕΝΤΑΥΡΟΝ ΔΙΟΝΥ for S. Alex. Caesar (*BMC* 124); all other dies unsigned.

(a) 25 mm AVT K M AV ΑΝΤΩΝΕΙ|ΝΟΝ, bust cuir. (*vA* 3232);

(b) 25 mm AVT K M A AN|ΤΩΝΕΙΝΟΝ, frontal view (*vA* 3231);

(c) 25 mm AVT K M AVP ΑΝΤΩΝΕΙΝΟΝ, frontal view (*BMC* 116-17);

(d) 25 mm ΑΝΤΩ|ΝΕΙΝΟΝ, bust cuir. (*vA* 3233, *Cop* 608 [err. C.]);

(e) 25 mm variant of (d) (*BMC* 99, 104-5, all err. C.).

(f) 25 mm AVT KAI M AV ΑΝΤΩΝΕΙΝΟΝ, cuir. (Paris 1507A);

(g) 20 mm ΑΝΤΩ|ΝΕΙΝΟΝ, head laur. (*vA* 3234, *BMC* 101-2 [err. C.]);

(h) 20 mm ΑΝΤΩ|ΝΕΙΝΟΝ, bust laur. (Munich, obv. as Kraft, pl. 42, 26, Attalaea);

(i) 20 mm ΑΝΤΩΝ|ΕΙΝΟΝ bust laur. (*Cop.* 620).

There are also unsigned dies for A. Faustina, Maesa and S. Alex Caesar.

31. *Tmolus-Aureliopolis*:
C. No subsequent issues.
32. *Tralles*:
C. and E. Distinguish by neocorate (see p. 116), though smallest pieces omit title and must be separated by portrait.
33. *Tripolis*:
C. No magistrates.

K. PHRYGIA

Larger denominations signed by magistrates at most cities, notable exceptions being Cibyra and Hierapolis. Dated coins found occasionally.

1. *Acmoneia*:
C. and E. Priscus signed issue for whole family of Septimius, rest unsigned. *BMC* 66 curious style but apparently C. *BMC* 77 corr. E., cf. style of S. Alex. pieces.
2. *Aezanis*:
C. Sole reign.
3. *Alia*:
?C. *BMC* 7–8 probably C., cf. Cidyessus (*MSPh* 544 ff.), also with frontal bust in cuirass and legend split, OC in second line. No other members of imperial family and no issues until Gordian.
4. *Amorium*:
C. No issues after sole reign. *Waddington* 5627 err. E.
5. *Ancyra*:
C. Beware confusion with Ancyra Galatiae. No issues until Philip.
6. *Apamea*:
C. and E. Issues signed Attalianus ca. 196–98 (C. Caesar) and Artema ca. 202 (includes Plautilla). Issue for E. signed by *grammateus* L. Ma . . . Sev . . . has usually been given to C. in error.
E. (a) 35 mm *Waddington* 5727; (b) 30 mm *vA* 3499 = *BMC* 171 (both err. C.); (c) 30 mm *BMC* 169–70 (err. C.); (d) 25 mm *vA* 3500–3501 (err. C); (e) 20 mm *vA* 3505 (no signature, corr. E.).

7. *Appia*:
C. No additional issues until Philip.
8. *Bria*:
[C.] Issues for Septimius, Domna and Plautilla. No subsequent issues.
9. *Bruzus*:
C. *Cop* 230 (err. E.), unsigned = Kraft, pl. 82, 48, die link with Otrus (C.). No issues until Maximinus.
10. *Cadi*:
C. and E. All signed: Demetrius (C.) or Menius Luc . . . (E.).
11. *Ceretapa*:
C. Issue for Septimius (*BMC* 9) with C. Caesar, ?nothing subsequent.
12. *Cibyra*:
C. and E. Many dies dated, era starting in A.D. 24. Die links with Eriza, etc. ca. 200 (Kraft, pl. 75, 8, and pl. 86, 9). Very distinctive engraver for E., e.g. *vA* 3742, also worked elsewhere (Isinda, Palaiopolis).
13. *Cidyessus*:
C. No additional issues until Philip.
14. *Colossae*:
C. and E.
15. *Cotiaeum*:
C. [and E.]. Coins of J. Paula (Berlin).
16. *Dioclea*:
E. No other issues. E. on all denominations: 33, 30, 25 and 20 mm.
17. *Dionysopolis*:
C. and E. Coins of C. undated. Coins of E. and Maesa dated † O, year 70.
18. *Docimeum*:
C. No issues between Macrinus and Gordian.
19. *Dorylaeum*:
C. and ?E. *Waddington* 5972 attributed to E.; *vA* 3563 might be C.

20. *Eriza*:
C. No subsequent issues.
21. *Eucarpea*:
C.
22. *Eumenea*:
C.
23. *Hadrianopolis-Sebaste*:
C. *Waddington* 6073 (err. E.)
24. *Hierapolis*:
C. and E. Distinguish by neocorate (see p. 116). Single die published for C (*vA* 8382); all others attributed to C. should be given to E., for whom there was a large issue. Some confusion with Hieropolis.
25. *Hieropolis*:
C. and E. No magistrates. Apparently only sole-reign issues for C. so that identification of portrait straightforward. Omission of AVT KAI for E.
26. *Hydrela*:
C. Single third-century issue.
27. *Hyrgaleis*:
C. Issue ca. 200, die linked with Sibia, etc. (Kraft, pl. 81, 40). Confusion over *BMC* 9: C. in *BMC* and E. in *MSPH*, probably mature C.
28. *Laodicea*:
C. and E. Distinguish by neocorate (see p. 115). Issue ca. 201 for Septimius and family; issue dated ϠΠΗ (211–12), mostly including neocorate, and issue signed P. Ael. Pigres, with neocorate, for C., sole reign. Most rev. of E. read ΔΟΓΜΑΤΙ CVNΚΛΗΤΟV in addition to neocorate. *vA* 3859, *McClean* 8832, and *Waddington* 6303 (all err. C.) = *Cop* 597 and *BMC* 243–45, Kraft, pl. 13, 31. Cf. style of “Ephesus” workshop of E. Also coins for Maesa, Annia Faustina and S. Alex. Caesar.
29. *Midaeum*:
C. *Waddington* 6339, 6342 (err. E).
30. *Nacolea*:
C. No issues after C.’s sole reign until Gordian.

31. *Otrus*:

C. Large issues signed Nigrinus and Alexander; no subsequent issues.

32. *Pellae*:

C.

33. *Philomelium*:

C.

34. *Prymnessus*:

C. No magistrates. *BMC* 32 ("C. or E. ?") = *Waddington* 6427 (C.), Kraft, pl. 82, 46, die linked with Otrus, Sibia and Docimeum. No additional issues until Pupienus.

35. *Sebaste*:

C.

36. *Sibia*:

C. No subsequent issues.

37. *Siocharax*:

[C.] Single issue known, signed Philiscus Aidux, but no pieces of C. yet published, though coins for Septimius, Domna, Geta and Plautilla.

38. *Synnada*:

C. and E. No magistrates. Issues for C. linked with several other cities (Kraft, pl. 81, 40), identifiable through their magistrates. Issue for E. and Maesa: *BMC* 54–55, *Waddington* 6547.

39. *Temenothyrae*:

C.

40. *Themisonium*:

C. No magistrates.

41. *Tiberiopolis*:

C. No magistrates. Coins for Domna and Plautilla.

42. *Trajanopolis*:

C.

L. PAMPHYLIA

1. *Aspendus*:

C. and [E.] Extensive issues for Paula, Soaemias and Maesa covering all denominations; no coins of E. published.

2. *Attalea*:

C. For a corpus, see N. Baydur, "Die Münzen von Attaleia in Pamphylian," *JNG* 1975, pp. 33–72; 1976, pp. 77–78. *Waddington* 3283 err. E.

3. *Magydus*:

C. and E. Dated, though not on regular era: KB, KΓ KΔ for Domna, C. and Plautilla; KΔ and KC for Macrinus; KH and KΘ for reign of E. *BMC* 5–6 (err. C.) → E. (portrait).

4. *Perge*:

C. and E. No dates or magistrates' names, issues can only be separated by style. Note that the countermark AK is found on coins of both C. and E. The radiate bust is never found for the young C., and rarely for the mature C., but commonly for E. The shape of the M (Λ) distinguishes many of the dies of E.

C. (young) *νA* 4675; *νA* 4676–77 = *Cop* 324; *νA* 4678; *νA* 4679 = *Cop* 325–26.

C. (mature) *Cop* 332, *νA* 4680; *Cop* 331, *BMC* 36, *Weber* 7342; *BMC* 37.

E. Illustrations not good enough for certainty as to die identities: *νA* 4685–88, 8515 (corr. E.); *BMC* 41–42, 43 (corr. E.); *Cop* 328 (err. C.); *Cop* 329 (err. C.); *Cop* 330 (err. C.) = *BMC* 42 (E.). Coins for Julia Paula and S. Alex. Caesar.

5. *Side*:

C. and E. No dates or magistrates' names, issues can only be separated by style. Coins probably struck on three occasions at least for C.: as Caesar (*νA* 4819), with Plautilla (*Waddington* 3460 for P.) and with Geta as Augustus. *BMC* 84 (C.) = *νA* 4822 (E.), probably C. Coins struck at least twice for E.: with Paula, ca. 219–20, and with Aquilia Severa and S. Alex. Caesar, ca. 221–22; there are also coins of Maesa and Soaemias.

6. *Sillyum*:

C. and E. No dates or magistrates' names. Coins for Geta Caesar, ca. 200, and as Augustus, ca. 210; presumably there are corresponding pieces for C. *BMC* 11 (corr. C.) = *vA* 4882 (err. E.). Coins for Maesa, Paula and Soaemias, and E. (*BMC* 13) from "Side" workshop (Kraft, p. 81); distinctive shape of M.

M. PISIDIA

1. *Adada*:

C. and E. Coins for mature C. (*MSPis* 1, 68, 75, 77), not for youthful

C. Range of denominations for E.:

30 mm E. (*MSPis* 1, 70, err. C.)

22 mm E. (*MSPis* 1, 1, err. C., *Waddington* 3554, corr. E.)

18 mm Maesa (*MSPis* 1, 81)

14 mm E. (*MSPis* 1, 80)

Cf. Seleucia Sidera for same engraver.

2. *Amblada*:

C. *vA* 4903 linked with Ephesus, Sardis and Daldis (Kraft, pl. 70, 59).

3. *Andeda*:

C. Distinctive engraver, Kraft's "Comama A" workshop (Kraft, p. 80).

4. *Antioch*:

C. and E. M^{me} Krzyzanowska, *Monnaies coloniales d'Antioche de Pisidie* (Warsaw, 1970), discusses the portraits very sensibly on pp. 49–50. Her attributions seem plausible with the exception of her obv. 1 for E. (sesterce), which must be C. on grounds of style, especially the heavy beard; *BMC* 37 gives the piece to C., correctly in my view.

5. *Apollonia Mordiaum*:

C. No subsequent issue until Philip.

6. *Ariassus*:

C. and E. Kraft's "Comama A" workshop cut dies for C. Extensive reverse links between C. and rest of family.

7. *Baris*:
C. Caesar only.
8. *Codrula*:
C. and ?E. Note that the same rev. dies used from Commodus to Gallienus so that rev. links may be misleading. *MSPis* 1, 1007–9 given to E. but attribution uncertain. 1007 should probably be C., cf. Etenna, *MSPis* 1, 550, which is definitely C. because of a rev. link with Septimius.
9. *Colbasa*:
C. and E. For a corpus, see H. von Aulock, *JNG* 1969, pp. 81–87. Style as Ariassus for C. and family; single piece of E., crudely cut.
10. *Comama*:
C. For a corpus, see H. von Aulock, *JNG* 1970, pp. 154–59. Rev. die link between Septimius and C. confirms attribution by style and portrait.
11. *Conana*:
C. Single issue for Septimius and family.
12. *Cremna*:
C. *MSPis* 2, 1320–21, prob. err. E., cf. coins of Geta and Domna.
13. *Etenna*:
C. and E. Rev. die link between Septimius and C. (*MSPis* 2, 541 = 550 rev.). Large issues for E., Paula, Soaemias, Maesa and S. Alex. Caesar, Kraft's "Side" workshop. Rev. die link between E. and Maesa (*MSPis* 2, 568 = 578).
14. *Isinda*:
C. and E. Regnal years. Very distinctive engraver for E., cf. Cibyra. Rev. links between E. and Maesa.
15. *Lysinia*:
C. Single issue for C. (rev. link with Domna), Geta and Domna.
16. *Olbasa*:
C. and E. For a corpus, see H. von Aulock, *JNG* 1971, pp. 18–23. Distinctive engraver for E., cf. Isinda. Coins for Paula, Soaemias and Maesa.

17. *Palaiopolis*:

C. and E. C. as Caesar only. Distinctive engraver for E., cf. Isinda, *MSPis* 1, 1100, err. C. (*BMC* 2, *McClean* 8993 and *Cop* 173 all C.; *Waddington* 7160 corr. E.), cf. style of 1109; head laur., cloak looped over shoulder, ribbons of wreath. Provides the range of denominations: *MSPis* 1, 1107 (35 mm), 1109 (27 mm), 1100 (20 mm).

18. *Panemoteichos*:

?C. and ?E. Coins for Domna, Maesa and Paula which suggests that there must also be C. and E. *MSPis* 2, 1128–30, given to C. but seem more likely to be E. from style. The Domna dies are either Ionian (*MSPis* 2, 1121–22 and probably 1123) or “Comama A” but the pieces attributed to C. fit neither in style.

19. *Pednelissus*:

C. and E. Issue for C. Caesar with Septimius and Domna, another for C. Augustus with Geta Augustus. *MSPis* 2, 1218, err. C., cf. Perge for style, Kraft’s “Sagalassus” workshop.

20. *Pogla*:

C. Kraft’s “Comama A” workshop style.

21. *Prostanna*:

C. *MSPis* 2, 1806 (err. E.) → Antoninus Pius (obv. same die as *MSPis* 2, 1783); 1802 = 1807 (err. E.) → C. Von Aulock notes that they might be C. because some are countermarked T in the manner of coins of Timbriada of C. These pieces are clearly of the same style as Septimius and family, products of the “Comama A” engraver and part of the hierarchy of denominations: Septimius (30 mm), C. (25 mm), Domna (22 mm) and Geta Augustus (22 and 15 mm).

22. *Sagalassus*:

C. and E. *νA* 5173 (C.) may be Marcus Aurelius. Hierarchical denominations for E.: 35 mm (E.), 30 mm (E. and Maesa), 25 mm (E.), 20 mm (Paula). Same style/engraver for Perge and Magydus.

23. *Seleucia Sidera*:

C. and E. *MSPis* 2, 1905, shares rev. die with S. Alex. (1943), which permits von Aulock to attribute it to E. and correct *BMC* 4 and *νA* 5227 (both err. C.).

24. *Selge:*

C. and E.

25. *Sibidunda:*

C. Von Aulock argues that *MSPis* 1, 1375 and 1378, are E. because of similarity of rev. type for S. Alex.; *BMC* says "E. and C." In fact must be C.: "Comama A" engraver as for Domna and Geta (*MSPis* 1, 1363 and 1374) and C. (1373).

26. *Timbriada:*

C. Almost all the pieces known are countermarked T or TI, a countermark not known from S. Alex. onwards.

27. *Tilyassus:*

C.

28. *Verbe:*

C. Apparently only sole reign, with Domna.

N. LYCAONIA

1. *Parlais:*

C. For a corpus, see H. von Aulock, *JNG* 1973, pp. 7–18. *Cop* 15 (Annia Faustina) is a forgery.

O. ISAURIA

1. *Isaura:*

C.

P. CILICIA

Many of the cities dated their coins, but according to widely varying local eras and not to a common provincial era. This is the only objective criterion in the absence of magistrates' names and titles.

1. *Adana:*

C. and E. *McClean* 9044 ("?C.") = Marcus Aurelius. *Waddington* 4053 certainly C. because rev. type is Domna.

2. *Aegeae*:
C. and E. Era dates from 47 B.C.
3. *Alexandria ad Issum*:
C. Era dates from 67 B.C.
4. *Anazarbus*:
C. and E. Era dates from 19 B.C., but not all dies dated. Titles of metropolis and A M K (πρώτης μεγίστης καλλίστης) from sole reign of C. onwards: ENΔΟ ΞΟV and ΤΡΟΠ (Τροπαιοφόρου) on coins of Diadumenian and E. (*BMC*, p. civ). E. held the office of *demiourgos* at Anazarbus and is shown on the obv. of *BMC* 19–20 wearing the crown and garments of *demiourgos*, the crown also occurs as rev. type (*BMC* 20, *Waddington* 4134). *McClellan* 9049 (err. C.) → E. Portrait too youthful for mature C. but legend includes metropolis and AMK; also ΤΡΟ and ENΔΟ ΞΟY, which must indicate E. The type suggests it is part of the series celebrating victory (?over Macrinus), cf. *BMC* 19 and 25.
5. *Anemurium*:
C. and E. Coins dated by regnal years.
6. *Augusta*:
C. Era dates from A.D. 20.
7. *Carallia*:
C. and E. Part of Kraft's "Comama B" workshop for C. *νA* 5607 certainly E. because rev. linked to *BMC* 3, *Barbia Orbiana*.
8. *Celenderis*:
?E. *νA* 5650 too crudely engraved for certain identification.
9. *Claudiopolis*:
?C.
10. *Colybrassus*:
C.
11. *Coracesium*:
C. Caesar only. For a corpus, see E. Levante, "The Coinage of Korakesion in Cilicia," *NC* 1978, pp. 25–32.
12. *Corycus*:
C.

13. *Diocaesarea*:
C. and [E.] *νA* 5544 and *BMC* 10 consistent with style of Septimius and family. Piece for Annia Faustina (*Waddington* 4271) suggests there may be coins for E.
14. *Epiphanea*:
C. Era dates from 68 B.C.
15. *Flaviopolis*:
C. and E. Era dates from 74 A.D.
16. *Hierapolis-Castabala*:
C. and E. Helpful rev. types: *νA* 5578 (C.) shows C. and Geta, *BMC* 13 shares same obv.; *νA* 5579 (E.) shows the stone of Emesa on quadriga.
17. *Irenopolis*:
C. Era dates from 52/3 A.D.
18. *Laertes*:
[C.] Coins for Domna.
19. *Mopsus*:
C. and E. For a corpus, see von Aulock, "Die Münzprägung der Kilikischen Stadt Mopsos," *AA* 78 (1963), pp. 231–78. Era dates from 68 B.C.
20. *Olba*:
C.
21. *Seleucia ad Calycadnum*:
C.
22. *Soli-Pompeiopolis*:
C. Era dates from 66 B.C.
23. *Syedra*:
[E.] Coins for Maesa.
24. *Tarsus*:
C. and E. The coins are particularly rich in titles. From the point of view of identification of the emperor, the most important is Α Μ Κ πρώτης μεγίστης καλλίστης, used from C.'s sole reign

onward. C. is almost always given the title ΠΠ during his sole reign, but E. is not. C. wears the crown of the *demiourgos* on some obv. dies. The billon coinage came to an end with C., no specimens known for E.

Q. GALATIA

1. *Ancyra*:
C. and ?E., Paris 164 almost certainly E. *vA* 6187 ("E. or C.?")
→ C. Caesar (cf. *McClellan* 9199).
2. *Pessinus*:
C. ?No issues after C.'s sole reign.
3. *Tavium*:
C. and ?E. Some pieces dated, era starts in 25 B.C. *BMC* 21–22
certainly C. because rev. clearly shows Septimius in chariot.

R. CAPPADOCIA

1. *Caesarea*:
C. and E. Dated by regnal years or consulship (e.g. *BMC* 286).
2. *Tyana*:
C. Dated by regnal years.

KEY TO PLATES

1. Youthful Caracalla. Adramyteum, *BMCMysia*, p. 5, no. 18.
2. Mature Caracalla. Laodicea, *vA* 3874.
3. Severus Alexander. Hyrgaleis, *vA* 8387.
4. Caracalla. Sardis, *vA* 3158.
5. Elagabalus. Philippopolis, Ashmolean Museum, Oxford.
6. Elagabalus. Palaiopolis (a) Berlin, *MSPis* 1, 1107.
(b) Berlin, *MSPis* 1, 1109.
(c) Berlin, *MSPis* 1, 1100 (erroneously
Caracalla).

7. Elagabalus. Olbasa, *vA* 5126.
8. (a) Elagabalus. Isinda, Berlin, *MSPis* 1, 818. Note date ETΔ, year 4.
 (b) Julia Maesa. Isinda, Mossop Collection, *MSPis* 1, 829. Same reverse die as (a).
9. Caracalla. (a) Ephesus, *vA* 1896.
 (b) Sardis, Bibliothèque Nationale, Paris.
 (c) Amblada, *vA* 4903.
 Common obverse die (a) = (b) = (c), see Kraft, pl. 70, 59 (Daldis omitted).
10. (a) Caracalla. Prostanna, *vA* 5148 = *MSPis* 2, 1802 (erroneously Elagabalus).
 (b) Julia Domna. Prostanna, Berlin, *MSPis* 2, 1793.
11. (a) Macrinus. Sardis, Boston.
 (b) Elagabalus. Sardis, Berlin. Same reverse die as (a).
12. Elagabalus. Sardis, Bibliothèque Nationale, Paris. Prize crown on base inscribed ΕΛΑΓΑΒΑΛΙΑ.

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VANDAL SILVER COINAGE IN THE NAME OF HONORIUS

(PLATES 25–28)

CÉCILE MORRISSON
JAMES H. SCHWARTZ

Coinage in silver, already rare when Honorius died in 423, continued to diminish during the next half century. During the same period, an unchecked supply of small copper coins was produced by both imperial and unofficial mints, and this resulted in severe monetary inflation: from mid-century to 498, the year of Anastasius' reform, the number of nummi per solidus doubled.¹ Presumably in response to the scarcity of imperial silver, the barbarian kings began to mint silver coins of their own at some time during the second half of the fifth century.² Signed or securely dated issues first appear in substan-

¹ A. H. M. Jones, *The Later Roman Empire 284–602. A Social and Administrative Survey*, 1 (Oxford, 1964), pp. 438–48; P. Grierson, "The Tablettes Albertini and the Value of the Solidus in the Fifth and Sixth Centuries A.D.," *JRS* 49 (1959), pp. 73–80; F. M. Clover, "Relations between North Africa and Italy, A.D. 476–500: Some Numismatic Evidence," in H. Temporini, ed., *Aufstieg und Niedergang der Römischen Welt* (in press).

² J. Friedlaender, *Die Münzen der Vandalen* (Leipzig, 1849); C. F. Keary, *Coinages of Western Europe* (London, 1879); *BMC Van*; P. Le Gentilhomme, "Le monnayage et la circulation monétaire dans les royaumes barbares en Occident (v^e–viii^e siècle)," *RN* 1943, pp. 59–62, 84–85, 101; M. Troussel, "Les monnaies vandales d'Afrique découvertes de Bou-Lilate et du Hamma," *Recueils de Notices et Mémoires de la Société Archéologique de Constantine*, 67 (1950–51), pp. 149–92; C. Morriison, "Les origines du monnayage vandale," *Transactions of the 8th International Numismatic*

tial quantities in Italy under Odovacar in the 470s and in Africa under Gunthamund in the 480s. These issues continue in Italy under the Ostrogoths and in Africa under subsequent Vandal kings until Justinian's reconquest of the West.

Of all the silver types of the second half of the fifth century, both imperial and Teutonic, perhaps the most plentiful is the well-known Vandalic siliqua struck in the name of Honorius with the VRBS ROMA reverse (*BMC Van*, p. 2, 6–9, pl. 1, 5–6). Wroth, following the Count de Salis, attributed this coin type to Gaiseric, thereby dating its issue before 477. It has frequently been pointed out, however, that the evidence for attributing this coin to Gaiseric is not secure, but there is general agreement that it precedes the signed coinage of Gunthamund (484–96) which was issued in three denominations: $\overline{\text{DN}}$, 100 denarii, weight about 2 g; $\overline{\text{DN}}$, 50 denarii, weight 1 g; and $\overline{\text{DN}}$ _{xxv}, 25 denarii, weight 0.5 g.³

During the past decade, the number of known specimens of the anonymous Vandal siliqua has trebled. To a small degree, authorized excavations account for some of the increase. For example, the University of Michigan excavation at Carthage unearthed two specimens of the siliqua and a hitherto unpublished type of half siliqua, also in the name of Honorius, whose reverse type is Victory left with wreath and palm, with the inscription [VIC]TO[RI]-[ΛΛV]G (Plate 27, 115). To a much larger degree, the increase in the number of specimens appears to result from the recent discovery of a large hoard of Vandalic silver that has been dispersed in Tunisia and from there to Paris, Lon-

Congress 1973 (Paris, 1976), pp. 461–72; S. Suchodolski, "Les débuts du monnayage dans les royaumes barbares," in P. Bastien et al., eds., *Mélanges de Numismatique, d'archéologie et d'histoire offerts à Jean Lafaurie* (Paris, 1980), pp. 249–56.

³ W. Hahn, *Moneta Imperii Byzantini I, Von Anastasius I. Bis Justinianus I. (491–565), Einschliesslich der Ostgotischen und Vandalischen Prägungen* (Vienna, 1973), nos. 2–4; hereafter *MIB*. Hahn did not list the anonymous silver coins of the Vandals because he then thought that they dated much before 490, and therefore before the reign of Anastasius, the starting date of his book. For the same reason, he also omitted the coinage of Odovacar (see *MIB* 3 [Nachträge], p. 59); Troussel (above, n. 2), pp. 156–60, doubts the attribution of the siliqua to Gaiseric by De Salis and Wroth; and Morriison (above, n. 2), pp. 469–71, tentatively assigned it to Huneric or Gunthamund.

don and elsewhere. Thus, in 1976, eight specimens of the **VRBS ROMA** piece together with one example of the smaller coin with the inscription **[VICTORI]-ΛΛVGG** appeared on the London market (Plate 27, 131). Although published as an imitation half siliqua in *Coin Hoards* 2,⁴ this coin did not attract further attention. Because of the appearance of many more specimens of both the siliqua and the half siliqua during the past several years, we have undertaken a more wide-ranging study of the series, based first on a tentative reconstruction of the contents of the hoard, and second on a comparison with the extant material of various origins.

CATALOGUE

In the catalogue which follows, siliquae and half siliquae are arranged in order of style: coins whose style imitates most closely imperial fifth century issues precede more degenerate copies. We have listed all specimens that we have been able to identify in museums, private collections and in dealers' trays. The 49 siliquae and 28 half siliquae that we believe belong to the recently discovered hoard are indicated by a number printed in bold type. All hoard coins in private collections were acquired in the 1970s from North African sources. During the past year, 1981–82, several more specimens have been offered for sale and we can look forward to an even greater number of examples of both denominations appearing in the future. In the description of individual coins, we have not noted which part of the inscription is preserved; only particulars differing from the general descriptions of the types have been noted. Die axis and weight are given when available.

SILICVAE

Obv.: **DNHONORI - VSPFΛVG**. Bust beardless r., pearl-diademed with pendants, draped and cuirassed.

⁴ *Coin Hoards* 2 (1976), p. 77, no. 322, fig. 17.

Rev.: VRBS ROMA or ROLIA. Roma wearing long robes (r. breast uncovered) and crested helmet, l. foot extended and r. drawn back, seated l. on cuirass with pellet in center of breast-plate; in r. hand Victory holding wreath, in l. long scepter (or staff?). In ex. RVPS. Parts of the inscription and type often are off flan.

Owing to difficulties arising from studying photographs from various sources,⁵ the analysis of die linkage of the siliquae has been limited to obverses. Coins marked with an asterisk are illustrated.

1. *Imitative Group*

1. ← 1.65 g. Commerce (Baldwin's), 1980.
2. ↙ 1.23 g. Commerce (Baldwin's). From a collection acquired in the 1950s.
3. ↘ 1.60 g. Commerce (Baldwin's), 1980.
4. ↘ 1.68 g. *Obv.* die of 3. Commerce (Baldwin's), 1980.
- * 5. ↗ 1.76 g. Private collection A. Acquired in 1975 from L. di Nicola, Rome.
- * 6. P.N. Schulten FPL, Sept. 1978, 73.
7. ↓ 1.71 g. *Obv.* die of 6. Commerce (Baldwin's). From a collection acquired in the 1950s.
8. *Obv.* die of 6. Private collection B.
- * 9. ↑ 1.67 g. Private collection C.
10. ↘ 1.61 g. Commerce (Baldwin's), 1980.
- * 11. ↙ 1.64 g. Private collection C.
12. ↙ 1.56 g. *Coin Hoards* 2, 322, fig. 17, 8.
- * 13. P.N. Schulten FPL, Sept. 1978, no. 72.

⁵ P. Grierson ("Numismatics," in J. M. Powell, ed., *Medieval Studies. An Introduction* [Syracuse, N.Y., 1976], pp. 130–31) cites Brunetti's study of the silver coins of Anna of Savoy from photographs (*RIN* 1963, pp. 143–68). The coins, now at Dumbarton Oaks, show a far greater number of die duplicates than Brunetti had originally observed.

14. ← 1.70 g. *Obv.* inscription ends PFA. Commerce (Baldwin's), 1980.
15. ↗ 1.62 g. Commerce (Baldwin's), 1980.
16. ↑ 1.45 g. *Coin Hoards* 2, 322, fig. 17, 6.
- * 17. ↓ 1.63 g. *Obv.* die of 16. Private collection A. Acquired in 1981 from a North African source in Paris.
- * 18. ↗ 1.67 g. *Obv.* die of 16. ANS Newell.
19. ← 1.70 g. *Obv.* die of 16. British Museum (not in *BMCVan*), ex. C.E.G. Nye, 1927.
- * 20. *Obv.* die of 16. Rauch 11, Nov. 1972, 537.
- * 21. ↑ 1.79 g. Private collection C.
- * 22. → 1.38 g. Cross on Emperor's shoulder. Private collection C.
- * 23. ↖ 1.30 g (worn and clipped). Private collection D.
- * 24. ↑ 1.73 g. Fitzwilliam Museum, Cambridge. Grierson collection, ex Grantley, Glendining, 25 July 1944, 2772. Morrisson (above, n. 2), pl. 52, 1.
- * 25. ↘ 1.69 g. Dumbarton Oaks. Ex Pierce from Feuardent, 1927.
26. → 1.58 g. Birmingham, Barber Institute 4098. Ex Baldwin 1963.
- * 27. ↖ 1.83 g. *Rev.* legend [R]ONIA. *BMCVan* 6, pl. 1, 3. Ex de Salis.
28. ↘ 1.69 g. British Museum (not in *BMCVan*) from J.W.E. Pearce, 1951.
- * 29. ↖ 1.81 g. Private collection D. Bought in Sousse (Hadrumetum), Tunisia, before 1964.
30. ↗ 1.49 g (worn). Vienna 191203.
31. → 1.45 g. *Rev.* Roma's staff with prominent barb, ↓. Commerce (Baldwin's). From a collection acquired in the 1950s.
32. → 1.58 g. *Rev.* as 31. Commerce (Baldwin's). From a collection acquired in the 1950s.
33. ↘ 0.97 g (worn and chipped). *Excavations at Carthage 1975 Conducted by the University of Michigan*, 1 (Tunis, 1976), no. 118.

- * 34. *Obv.* double struck. Kricheldorf, 27 Nov. 1979, 479.
- * 35. ↑ Kurpfälzische Münz., 17 Dec. 1979, 439.
- * 36. ↗ 1.55 g. Private collection D. Bought in Sousse before 1964.
- * 37. ↗ 1.74 g. Bibliothèque Nationale 9743.
- * 38. ↖ 1.66 g. Platt, 27 November 1972, no. 125, from a Tunisian collection.
- 39. ↑ 1.61 g. Brussels.
- * 40. → 1.59 g. Private collection C.
- 41. ← 1.78 g. Commerce (Baldwin's), 1980.
- * 42. ↘ 1.58 g. Private collection C.
- * 43. ↗ 1.55 g. Private collection C.
- * 44. ↖ 1.53 g. Private collection C.
- 45. → 1.53 g. Commerce (Baldwin's), 1980.
- 46. ↑ 1.73 g. *Coin Hoards* 2, 322, fig. 17, 3.
- * 47. ← 1.79 g. *Obv.* as 46. Private collection C.
- * 48. Münz. u. Med. FPL 363, January 1975, 21.
- 49. ↑ 1.70 g. *Obv.* graffiti: X on emperor's cheek; III on lips and lower part of nose, possible indicating X + III = XIII. *Coin Hoards* 2, 322, fig. 17, 4. Later seen by W. Hahn at Beckenbauer's, Munich.
- * 50. ↘ 1.21 g. Private collection C.
- * 51. *Obv.* DM HON[ORI] Peus 250, 15 March 1954, 1991.
- 52. ↓ 1.28 g. *Obv.* DM HONORI-]. Platt, 27 November 1972, no. 126, from a Tunisian collection.
- * 53. → 1.23 g. *Obv.* die of 52. Private collection D. Bought in Sousse before 1964.
- * 54. 1.69 g. Münz. u. Med. FPL 308, January 1970, 25.
- * 55. ↙ 1.63 g. *BMC Van* 8, pl. 1, 5. Ex de Salis.
- 56. → 1.36 g. *Excavations at Carthage 1978 Conducted by the University of Michigan*, 7 (Ann Arbor, 1981), 224.

- * 57. ↘ 1.65 g. Münz. u. Med. FPL 343, March 1973, no. 21.
- * 58. ↘ 1.62 g. ANS. Bought in North Africa in the early 1970s.
- * 59. 1.48 g. Private collection D. Bought in Carthage before 1964.
- 60. ← 1.22 g (clipped). *Obv.* [DN]HONORI-VSPCAV[G]. *BMC-Van* 7, pl. 1, 4. Ex de Salis.
- * 61. Hirsch 48, June 1966, 779.
- * 62. Kress 150, June 1970, 986.
- * 63. ↗ 1.11 g (worn and clipped). Private collection D. Bought in El Djem (Thysdrus), 1948.
- * 64. ↗ 1.70 g. Private collection C.
- * 65. ↗ 1.07 g. Private collection C.
- 66. ↗ 1.72 g. *Coin Hoards* 2, 322, fig. 17, 5.
- * 67. ↘ 1.50 g. Private collection C.
- * 68. ↗ 1.49 g. Private collection C.
- * 69. ↘ 1.50 g. Private collection C.
- 70. → 1.67 g. Commerce (Baldwin's), 1980.
- 71. ↑ 1.50 g (chipped, pierced and broken). Commerce (Baldwin's), 1980.
- 72. ← 1.57 g. Commerce (Baldwin's), 1980.
- * 73. Kurpfälzische Münz., 17 December 1979, 438.
- * 74. ↘ 1.53 g (chipped). *Obv.* JVSPEAV. Fitzwilliam Museum, Cambridge. Grierson collection, ex Glendining, 12 May 1948, 217.
- * 75. ↗ 1.65 g. Fitzwilliam Museum, Cambridge. Grierson collection, ex Dilen 1949.
- * 76. → 1.65 g (chipped). *Obv.* graffiti: XIII in field r.; X in hair above diadem; IIII on cheek and chin.
- * 77. ← 1.06 g (chipped). *Rev.* RONA. Bibliothèque Nationale 9744.
- 78. ↘ 1.77 g. Commerce (Baldwin's). From a collection acquired in the 1950s.

79. ↓ 1.64 g. British Museum (not in *BMC Van*). Gift of L.A. Lawrence in 1927.
80. ↘ 1.62 g. *Excavations at Carthage 1975 Conducted by the University of Michigan*, 1 (Tunis, 1976), no. 119.
81. ↙ 1.62 g. *Excavations at Carthage 1977 Conducted by the University of Michigan*, 5 (New Delhi, 1980), no. 149.
82. → 1.58 g. Commerce (Baldwin's). From a collection acquired in the 1950s.
- * 83. Münz. u. Med. FPL 199, April 1960, 23.
- * 84. ↗ 1.51 g. *Obv.* D]NHONO[RI- V]SPEΛV. Serifs very prominent on most of the letters. Bibliothèque Nationale R1653. From Florange, 1960.
- * 85. 1.51 g. Paris market, 1955.
- * 86. ↙ 1.61 g. Private Collection D. Bought in Sousse before 1964.
- * 87. → 1.63 g. Bibliothèque Nationale 1969/369.
- * 88. Münz. u. Med. FPL 225, August 1962, 21.
89. ↑ 1.53 g. Brussels.
- * 90. Cahn 47, 17 May 1922, 1050 (incorrectly attributed to John).
91. ↓ 1.80 g. Vienna 191204.
92. ← 1.60 g. Paris market 1974 from North Africa.
- * 93. ↗ 1.52 g (worn). *BMC Van* 9, pl. 1, 6. Ex de Salis.
- * 94. ↙ 1.49 g. Private collection C.
95. → *Obv.* die of 94. Commerce (Baldwin's), 1980.
- * 96. → 1.29 g. Private collection C.

2. Degenerate Group

- * 97. ↓ 1.17 g. *Obv.* ДИΗ[ORI-]VSPFΛVG. Milan.
98. ↗ 1.63 g. *Coin Hoards* 2, 322, fig. 17, 2.
- * 99. ↘ 1.03 g. *Obv.* Д И Η Ο Ι Ο [. *Rev.* folds of robe and cuirass are confused. Area of flan containing emperor's cheek

and Roma's skirt is flattened. Private collection A. Acquired in 1980 from Bruce Braun of Ancient Arts (Buffalo).

100. ← 1.51 g. *Obv.* die of 99, but D IH ONORI[]VS, the V badly formed. *Coin Hoards* 2, 322, fig. 17, 1.
- *101. ↘ 1.35 g. *Obv.* inscription as 99. Private collection C.
- *102. ← 1.29 g. *Obv.* inscription as 99. Private collection C.
103. † 1.31 g. Commerce (Nomisma, Paris), 1980 (A8400).
- *104. *Obv.* DIHONORI[. Private collection E.
105. ↑ 1.31 g. *Obv.* UNONIII[. *Rev.* YOI (for ROMA). *Coin Hoards* 2, 322, fig. 17, 7.

3. Possible Contemporary Forgeries⁶

- *106. ↙ 1.15 g. *Obv.* P+ΛVC for PFΛVC. Peculiar style: several pellets confused for the fibula. *Rev.* crude with very thin letters. Private collection C.
- *107. → 1.57 g. ANS Newell. *Rev.* ROM[Λ]-ROMΛ, blundered or a mint error.
108. ↓ 1.67 g. *Obv.* DIHONORI[*Rev.* I V IIII + ΛIV; blundered exergal mark. Hahn collection (Vienna). Bought in 1978 in a lot of several silver coins of Justinian of Carthage, but North African provenance uncertain.

⁶ The ANS has an imitation of C. 70 (C. denotes coins in Henry Cohen, *Description historique des monnaies frappées sous l'empire Romain*, 8 [London, 1892]) in a style that is easy to distinguish from both imperial and Vandalic, and which is like Frankish and Lombardic. A. S. Robertson, in *Roman Imperial Coins in the Hunter Coin Cabinet*, 5, *Diocletian (Reform) to Zeno* (Oxford University Press, 1982), lists two "irregular?" URBS ROMA siliquae for the mint of Ravenna, p. 440, 22-23; only 23 is shown in the plates, and does not appear to be Vandalic. Also not shown is p. 444, 45, catalogued under an uncertain mint as an "irregular?" silver "siliqua?" with the Victory reverse and weighing 0.68 g; this coin is likely to be a Vandal half siliqua. The Cabinet de Médailles also has contemporary forgeries in this style, which appear to be imitations of a VICTORIA ROMANORVM siliqua, but with the Ravenna (RVPS) mint mark (9729, 9732, and 9738b). These probably originated in northern Europe. In contrast, the three specimens catalogued as possible forgeries are closer in style to the Vandalic coins.

HALF SILIQUAE

Obv.: DN HONORI-VSPF AVG. Bust beardless r., pearl-diademed with pendants, draped and cuirassed. Border of dots.

Rev.: VICTORI-Λ AVG or GG (indicated where legible). Victory advancing or standing l., wreath in outstretched r. hand, palm in l. and extending over l. shoulder. Border of dots. In ex. RV.

1. *Imitative Group*

- *109. ↗ 0.61 g. Private collection C.
- *110. ↗ 0.90 g. National Museum, Copenhagen. Collected by Falbe around 1816.
- *111. ↘ 0.65 g. Private collection C.
- *112. ↘ 0.74 g. *Rev.* GG. Copenhagen. Collected by Falbe.
- *113. ↗ 0.64 g. Private collection C.

2. *Degenerate Group*

- *114. 0.74 g (worn). Private collection F.
- *115. ← 0.68 g (broken). *Excavations at Carthage 1977 Conducted by the University of Michigan*, 5 (New Delhi, 1980), no. 150.
- *116. ↓ 0.70 g. *Rev.* die of 115. Private collection C.
- *117. ↑ 0.88 g. *Obv.* die of 116. Private collection C.
- *118. 0.72 g. Fitzwilliam Museum. Grierson collection, from Ratto 31 May 1971.
- *119. 0.78 g. Münz Zent., Köln, 27 September 1977, 549.
- *120. ↘ 0.97 g. *Rev.* GG. Copenhagen. Collected by Falbe.
- *121. 0.65 g. Bibliothèque Nationale BN 1980/204.
- *122. 0.69 g. NFA, 27–28 Feb. 1979, 972; J. Schulman, 28–29 Sept. 1976, 872. Assigned by both to Constans.
- *123. ↑ 0.73 g. W. Hahn collection, Vienna. *NumCirc* 1981, p. 404, no. 8382.

- *124. ↘ 0.66 g. Private collection G. Purchased from Nomisma, Paris (A 6759).
- *125. → 0.38 g. Private collection C.
- *126. ↗ 0.70 g. *Rev. G.* Private collection H. from France Numismatique (Mulhouse), 11–13 October 1981, 480.
- *127. ↓ 0.58 g. *Rev. GG. ANS.* Purchased from Nomisma, Paris (A 6755).
- *128. ↘ 0.69 g. *Rev. G.* Private collection C.
- *129. ← 0.70 g. *Rev. G.* Private collection A. Purchased from Nomisma, Paris (A 6757).
- *130. *Rev. GG.* France Numismatique (Mulhouse), FPL 20, Feb. 1982, 365.
- *131. 0.75 g. *Rev. GG.* Private collection F.
- *132. ↙ 0.64 g. *Rev. GG.* Private collection K. *Coin Hoards* 2 (1976), 322, fig. 17, 9.
- *133. → Private collection D. Purchased from Baldwin's, 1982.
- *134. ↓ 0.58 g. Private collection A. Purchased from Nomisma, Paris (A 6756).
- *135. ↙ 0.62 g. *Obv.* die of 134. Copenhagen. Collected by Falbe.
- *136. ↗ 0.70 g. *Obv.* die of 134. *Rev. G.* Commerce (Baldwin's), 1981. "Purchased from a passing North African."
- *137. ↘ 0.56 g. Commerce (Baldwin's), 1981; Bonhams (London) 2, 23–24 Sept. 1980, 394.
- *138. ↓ 0.64 g (chipped). *Rev.* die of 137. Private collection C.
- *139. 0.7 g. Fitzwilliam Museum. Grierson collection, from Bonhams (London) 7, 29–30 March 1982, 482.
- *140. ← 0.62 g. Private collection C.

Stylistic and metrological analyses (see below) indicate that both types of coins were issued together, and that the Victory type was indeed intended to be a fractional denomination of the VRBS ROMA type. Moreover, these analyses suggest that the series might have been issued over an extended period of time. Although both denominations ap-

pear to be imitations of imperial issues of Honorius (the siliqua, C.70; the half siliqua, C.38), the extreme rarity of the presumed prototypes suggests that they may not actually have inspired the Vandal coins directly. More likely prototypes are the imperial issues of later western emperors (John and Valentinian III) whose siliquae and half siliquae, although rare, are nonetheless more common than the presumed prototypes of Honorius. While by no means compelling, these considerations taken together support the traditional attribution of the VRBS ROMA siliqua to Gaiseric.

As is usual, the information available is scanty about the circumstances and location of the hoard, which must have been found before 1976, when the nine specimens published in *Coin Hoards 2* could be viewed as Spink's. It was said to come from Tunisia and to comprise some 700 specimens. Although 700 is an inaccurate figure often put forward regarding North African finds,⁷ whether for a numerological or some other mysterious reason, it suggests that the hoard may have been large.

We have been able to identify 49 specimens of the VRBS ROMA siliqua and 28 of the Victory type fractions as belonging to the hoard because they have appeared in groups on the market in Tunisia, London and Paris during the past six years. Because of the previous rarity of these coins, it seems plausible that most of the individual specimens of these two issues with a Tunisian origin that have appeared on the market between 1975 and 1982 also share this provenance. We think it probable that these coins come from one large hoard that is being dispersed in small batches rather than from several smaller finds made during the past six years.⁸

⁷ Seven hundred was also the figure alleged for the recent Constantine IV gold hoard (see C. Morriçon, "Un trésor de *solidi* de Constantin IV de Carthage," *RN* 1980, p. 155) and for the Rougga hoard of 1972 although the latter amounted only to 168 specimens (*Ann EPHE* 1974-75, pp. 455-62).

⁸ In support of the idea that individual coins which have recently come on the market belong to this hoard is that no previous half decade has seen the appearance of Vandalic silver in such great quantities. This supposition must be made tentatively, however, because the use of metal detectors for unauthorized excavation has undoubtedly increased greatly in North Africa during the same period.

The hoard as reconstructed did not contain any signed Vandalic silver, and therefore it provides only a negative clue to the dating of the issues, namely that they must antedate Gunthamund's signed silver coinage as well as the dated imitative issues in the name of Honorius (*BMC Van*, p. 5, 1–2, pl. 1, 12). As previously observed,⁹ this latter issue is more primitive or degenerate in character: the DN at the beginning of the imperial titulature is omitted and the reverse type of Roma seated is replaced by the local figure of Carthage standing, accompanied by a dating in regnal years of a Vandal king, ANNO IIII or V K[arthaginis]. The fourth and fifth years mentioned must either be those of Huneric (480 and 481) or of Gunthamund (488 and 489). The terminus ante quem for the deposit of the hoard, and a fortiori for the two issues, lies therefore in the 480s.

Postponing for the moment a detailed discussion of the precise dating of these issues, let us observe that the styles of both types of coins are diverse enough to suggest that their production might have extended over a considerable period of time. While it is not really possible to confuse any of these coins with the proposed imperial prototypes of Honorius (Plate 28, S1–3; H1–8), the style of most of the specimens in the hoard and of previously published examples of the siliqua is closer to that of later imperial issues (Plate 28, S5–6; H12–21). Several stylistic criteria, which are similar for both denominations, can serve to distinguish these imitative African issues from fifth century imperial coins.

Most striking is the rendition of the emperor's portrait, especially his facial features.¹⁰ His eye is opened wide in an exaggerated manner

⁹ C. Morrisson (above, n. 2), p. 469.

¹⁰ Similar treatment of facial features can be seen in fifth century African mosaics: see, for example, K. M. D. Dunbabin, *The Mosaics of Roman North Africa* (Oxford, 1978), p. 250 and pls. 40–43, which show a hunting scene from Bordji-Djedid, Carthage, now in the British Museum, and p. 191, pl. 191, which shows Daniel in the Lion's Den from a tomb in Sfax. In addition, representations of the Emperor Leo on silver that dates from the third quarter of the fifth century (H. Goodacre, *A Handbook of the Coinage of the Byzantine Empire* [London, 1957, rpt. 1965], p. 42 (hereafter Goodacre), and Ratto, 9 December 1930 [rpt. Amsterdam, 1974], nos. 261 and 262) are not very different from that of Honorius on the Vandalic siliquae of the best style, which we have called "imitative." Even some specimens of Valentinian III (Plate 28, H13–21), and of Marcian (Goodacre, p. 37; Ratto, no. 227) are much closer to the Vandal style than are imperial coins struck earlier in the century.

that suggests surprise or fear. This impression is conveyed by highly schematic modelling: often the eye is indicated only by a pellet underlined by a deep stroke of the chisel. The Vandal nose characteristically is formed by two deeply engraved strokes that meet at a 45° angle; prominent pellets often appear both at the tip of the nose and at the end of the base of the nose on these coins. The engraver apparently executed the nose with a stroke starting at the bridge, pausing at the tip by digging into the die, then continuing the stroke to construct the base of the nose; he again stopped by digging deeply into the die. Details of the emperor's hair, diadem and dress are also simplified and stylized on Vandalic coins, and therefore appear less refined and frequently less realistic than the corresponding features on imperial issues.

The representation of Roma on the reverse of the Vandalic siliqua still shows the main features of the Hadrianic cult statue,¹¹ but the body of the goddess is static, lacking the graceful movement still evident on imperial issues. Roma's robes appear stiff and her helmet is indicated only schematically, perhaps being mistaken for hair. The position of the legs of the goddess (the left extended and the right flexed) can no longer be determined on the Vandalic siliquae as it could in imperial coins issued at the beginning of the fifth century. (A general trend toward anatomical uncertainty in the drawing of the figures of the reverse begins to appear on imperial coins of the usurper Constantine III in the 420s.) The Victoriola is indicated only crudely, and rarely can be seen from head to toe. On most of the specimens, the lower part of the statue's robe appears to be misunderstood, and is represented

¹¹ This type, ultimately deriving from representations of Athena which first appeared on silver and gold coins of Lysimachus in 297 B.C., copied the Hadrianic cult statue of *Dea Roma* in the Temple of Venus at Rome. This structure was damaged by fire in A.D. 307, and was restored by Maxentius (306–12), who set up a new porphyry statue showing Roma wearing a crested helmet, long tunic and mantle draped across the lap to the ankles, seated on a high-backed throne to which a round shield was attached (C. C. Vermeule, *The Goddess Roma in the Art of the Roman Empire* [Cambridge and London, 1959], pp. 31–46). It is interesting that the altar of the *Gens Augusta* at Carthage (Vermeule, pl. 10) on which Roma was seated was treated in a very similar manner. Although this early monumental representation cannot have been the direct model for the coins, its presence in the center of the city may have contributed to the choice of the type, since it was still in place during the Vandal occupation.

by two upward strokes that are unrelated to the rest of the design and which resemble the opened petals of a flower (↓). The cuirass with leather straps attached to the breast plate upon which Roma sits is difficult to recognize and appears more like a stool with a fringed skirt than like a piece of armor.

On the reverse of the half siliqua, Victory advances stiffly left or stands rigidly. Even though Victory can appear quite stolid on fifth century imperial coins when compared to earlier representations, she still retains some grace and sense of movement. None of the feeling of the classical prototype,¹² a spirit that has just alighted, remains on these Vandalic coins. The folds of Victory's peplos are merely suggested by a few parallel straight lines; the girdle, by a chevron or a horizontal line. Her coiffure is similar in appearance to Roma's helmet, and is indicated by a single line suggesting a pigtail. The left wing on almost every specimen appears to be misunderstood for some decorative suspension from the wreath or arm, and does not seem to be attached to Victory as an appendage. Unlike the realistic circular wreaths on imperial coins, the Vandal wreath looks like a loop of thick rope with a knot at each end, one of which usually is slightly longer than the other (⌘). The right wing is represented by a thick vertical stroke, and the palm frequently appears to be more like a baton with a knob at each end (↗) than like a frond. On some specimens (see especially 111 and 116) Victory trails a curious object like a lion's tail (↘). Presumably this structure, already seen on half siliquae of Valentinian III (see Plate 28, H18, 21), is a misrepresentation of the billowing lower fold of the peplos seen on earlier imperial coins.

The stylistic differences between some of the coins in the hoard are extreme. Stylistic and metrological analyses concur in defining a peculiar group of coins that might end the series represented in the hoard. This group was virtually unrecognized before the discovery of the hoard, since the only other specimens belonging to it that we have identified (97, 120 and 133) had not been published. The group may be called degenerate: the siliqua is characterized by frequent ligatures in the

¹² See, for example, M. Bieber, *The Sculpture of the Hellenistic Age* (New York, 1961), pp. 125–26; A. R. Bellinger and M. A. Berlincourt, *Victory as a Coin Type*, ANSNNM 149 (1962).

obverse legend (a feature characteristic of later Vandal and Byzantine coins from Carthage), and both siliqua and half siliqua are even rougher in design than the coins in the derivative group that imitate imperial issues more closely. The ruler's portrait is flatter and even more cursorily modelled: it is primitive in appearance with prominent lips and exaggerated nose. The folds of the chlamys and of the robes of Roma and Victory are represented more schematically. The pendants from the emperor's fibula now seem to be misunderstood, appearing as independent pellets on the chlamys unrelated to the brooch of the fibula (see for instance 99, 100, 121, 133 and 135). Metrological analysis reveals that both the degenerate siliquae and half siliquae are about 20% lighter than the less primitive Vandal coins (see below).

In addition to their distinctive style, these Vandalic imitations also have a characteristic fabric. They are weakly struck: their relief is lower than on imperial issues. Flans are irregular, and not large enough to accommodate the entire die. The ruler's head therefore occupies a far greater proportion of the field than on imperial coins, and both obverse and reverse images are frequently off center. As a result, only rarely is even a small part of the beaded border preserved, and it is the rule that only half of the circumferential legends is preserved. The exergual letters are also partially or entirely missing on about half the specimens. In contrast to imperial coins, there appears to be no preferred orientation of obverse to reverse die.¹³

¹³ Die axes on the siliquae: 12 o'clock, 15%; 1, 14%; 3, 14%; 5, 15%; 6, 17%; 7, 11%; 9, 14%; 11, 15%. On the half siliquae: 12 o'clock, 5%; 1, 5%; 2, 5%; 3, 5%; 4, 10%; 5, 10%; 6, 14%; 7, 14%; 8, 5%; 9, 14%; 10, 5%; 11, 10%. This virtually random distribution is different from the orientation of imperial coins. On 72 specimens from the same period in the Cabinet des Médailles at the Bibliothèque Nationale, 29 (41%) have die axes at 12 o'clock, and 41 (57%) at 6 o'clock. The less careful fabric and relative clumsiness in design of the Vandal coins point to work done by non-specialists (probably *argentarii* or *argyrokopoi*, see J.-P. Sodini, "L'artisanat urbain à l'époque paléocrhétienne," *Ktema* 4 [1979], p. 95, referring to the *vicus argentarius* of Carthage described by Saint Augustine [*Confessions*, 6.9.14] a district where goldsmiths and bankers were grouped). Innovation of coining by inexperienced minters is to be expected because the imperial mint at Carthage had ceased activity in 307 A.D. and its staff had been withdrawn to Ostia (308) and later to Arles (313) (*RIC* 6, p. 411; M. Hendy, "Mint and Fiscal Administration under Diocletian, His Colleagues and His Successors, A.D. 305-24," *JRS* 62 [1972],

Similarity of style and fabric is one of the key pieces of evidence for the idea that both the large and the small coins were struck at the same mint during the same period of time. As indicated in the foregoing discussion, the stylistic features that distinguish Vandalic imitations from imperial issues are strikingly similar in both siliqua and half siliqua. The emperor's portraits on some specimens of both denominations are so much alike that it is tempting to suppose that both were engraved by the same hand (compare, for example, 10 with 109; 64 with 111 and 112; 69 and 73 with 129; 99 with 131; 102 with 115). Also, as described above, the style of the reverse types is similar, as is the form of the letters. Especially characteristic are the prominent serifs on the letters Λ , I, P, R, and V in the inscriptions on both coins. While it seems that a larger proportion of the half siliquae belong to the degenerate group than of the siliquae, one of the more objective criteria for distinguishing between the degenerate and the less primitive group—the occurrence of ligatures between letters in the obverse legend—does not apply to the half siliquae. The two As of the reverse legend on 128 and 131 are connected, however ($\Lambda\Lambda$).

Metrological analysis of both the siliqua and half siliqua support the idea that the smaller coin was struck at half the theoretical value of the larger coin (Table 1).¹⁴

p. 77). The only tentative instance of the resumption of coinage at Carthage before the Vandal conquest is represented by the issue of four small bronzes with the anonymous legend DOMINO NOSTRO, DOMINIS NOSTRIS P(ER)P(ETUIS) AVG(USTIS) and the mint signature CARTAGINE (R. A. G. Carson, *Late Roman Bronze Coinage A.D. 324–498* [London, 1965], pt. 2, 576–80; hereafter *LRBC*). These coins date to the end of the fourth or beginning of the fifth century, and can be attributed either to Gildo (397–98) or to Count Boniface (ca. 422–29). R. Turcan favors the attribution to Gildo ("Trésors monétaires trouvés à Tipasa," *Libyca* 9 [1961], pp. 211–12).

¹⁴ The average weight of the half siliquae is actually 17% lighter than half the average weight of the siliquae. This lower weight perhaps can be explained by a higher velocity of circulation of the fraction; a similar explanation was given for the metrology of half sovereigns and half napoleons in the nineteenth century (S. Jevons, "On the Condition of the Metallic Currency of the U.K. . . .," *Journal of the Statistical Society* 31 [1868], pp. 455–56). The average annual loss in weight for half sovereigns was between 0.64–0.79 g, while that of sovereigns reached only 0.042–0.051 g.

TABLE 1
Analysis of Weights

	Number	Average Weight	Standard Deviation	Coefficient of Variation
<i>Silique</i>	93	1.54 g	0.19	12.6%
<i>Half silique</i>	30	0.69 g	0.11	15.6%

The wide range of weights of both coins suggests the possibility that there may be more than one population of coins in each denomination. The total number of half siliquae is too small to yield convincing data to support this point (Fig. 1), but the frequency distribution of silique clearly reveals a bimodal distribution of weights (Fig. 2). In these

FIGURE 1
Distribution of Half Silique
Weights in Grams

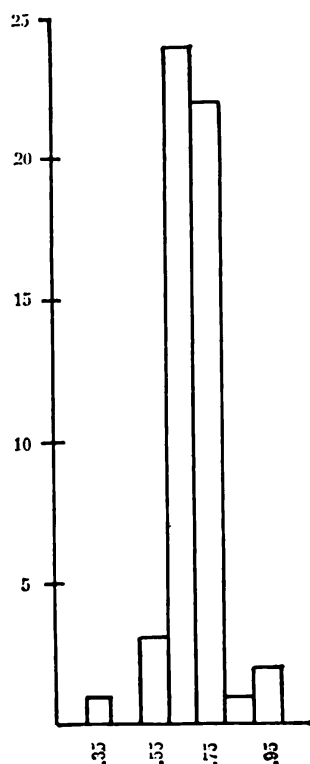
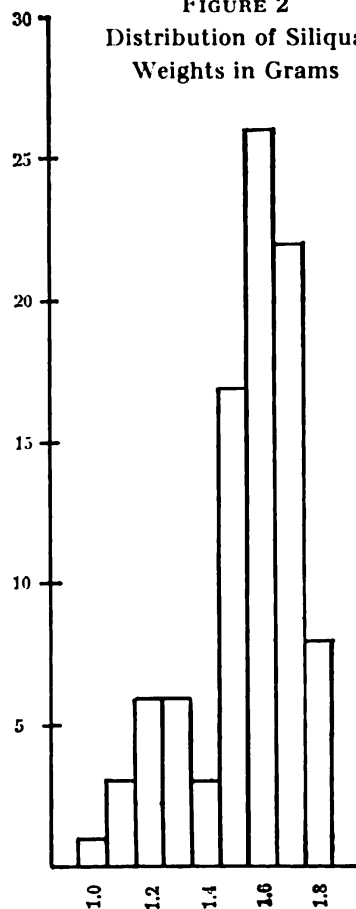


FIGURE 2
Distribution of Silique
Weights in Grams



histogram analyses, constructed with steps of 0.1 g, the average weight of the heavier population of siliquae is about 1.65 g; the average of the lighter group, 1.25 g.

What is the explanation of the bimodal distribution of early Vandalic silver coinage? The mean weight of all the Vandalic siliquae, 1.54 g, corresponds closely to that of earlier, authentic coins of Honorius¹⁵ and to the weights of Italian siliquae of the first half of the fifth century,¹⁶ suggesting that these imperial issues served as a model not only for the types used on the Vandalic coins, but also for their weight standard. The mode for the larger Vandalic coin lies between 1.5 and 1.7 g (8 and 9 carats), indicating that the theoretical weight intended might have been 9 carats, or precisely 1/192 of a pound.¹⁷ On the other hand, the average weight of the lighter group of Vandalic siliquae (mean weight 1.26 g, mode 1.12–1.22 g) is close to that of the Honorius ANN O K(artago) issue (*BMC Van*, Huneric, 1–2), and possibly resulted from clipping the heavier specimens to adjust to a later weight standard. The stylistic group that we have called “degenerate” is also light (mean weight 1.33 g, standard deviation, 0.17, N = 8), and may have been struck directly according to the new weight standard.¹⁸

Metrological analysis of the siliquae from the hoard provides some support for the idea that the bimodal distribution arose because of a

¹⁵ A. Evans, “Notes on the Coinages and Silver Currency in Roman Britain from Valentinian I to Constantine III,” *NC* 1915, pp. 465–66.

¹⁶ The average weight of 23 specimens in Paris was 1.48 g.

¹⁷ If the theoretical weight were 9 carats these coins would not be reduced siliquae, but half *argentei* (1/96). The assumption that these coins were siliquae worth 1/24th of a solidus would imply a gold to silver ratio of 1:9, far below the 1:14.4 ratio well documented in the West at that time. *Cod. Theod.* 13.2.1 (A.D. 397) is not contradicted by *Cod. Theod.* 8.4.27 (422) in which the ratio of 4 solidi (instead of 5) to a silver pound (1:18) is simply a favor granted to the *primipiles*, as shown by P. Grierson (see J. Durliat, “La valeur relative de l’or et de l’argent dans l’empire romano-byzantin [IV^e–VIII^e siècles],” *RN* 1980, p. 143, for references to texts and previous literature). At a ratio of 1:14, and assuming that the coin had an intrinsic rather than fiduciary value, the 1/192nd would have been worth 1/36th of a solidus (1.69 g × 36 = 60.84 g; 60.84 g:4.5 g = 13.4 or almost 14).

¹⁸ At a gold to silver ratio of 1:14, they were worth 48 to the solidus, and could have been considered heavy half-siliquae (1/240) (1.22 g × 48 = 58.56 g; 58.56 g:4.5 g = 13, which represents an underestimate or fiduciary rate of about 9%).

change in weight standard. Even though there is no marked difference between the weight distributions of the coins from hoard and non-hoard samples, the mode of the lighter coins from the hoard (1.0–1.1 g) differs slightly from the mode of the lighter group from all 93 siliquae (1.3–1.4 g) for which we had weights. This difference may be explained by the deposition of the hoard late in the sequence of the series: with time, an increasing proportion of all of the coins would have been adjusted to the new weight standard. Thus early, unclipped specimens, originally on the light side of the distribution, would be converted into even lighter coins through clipping by the time the hoard was deposited.

It is curious that the weight of the Vandalic half siliqua does not correspond to the imperial standard for the denomination imitated, which appears to lie between 5 and 6 carats.¹⁹ Thus the value of this smaller imperial silver coin was greater than half that of the larger imperial siliqua. In contrast, the weight of the smaller Vandalic denomination corresponds to about half the weight both of the larger fifth century imperial *and* of the larger Vandalic coins. This adherence to the principle that half the weight corresponds to half the value may be the beginning of the regular system of multiples later used on signed Vandalic silver coinage from the reign of Gunthamund.

Analyses for silver have been carried out on only a small number of the coins and, unfortunately, do not permit us to relate composition to style.

They were performed by Peter Gaspar (G), J. N. Barrandon (B) and R. Mauterer (M).²⁰ Total weight of silver was calculated by mul-

¹⁹ The mean weight of 20 VICTORIA AVG (GG) or (GGG) half siliquae (before 395, 4 of Honorius [*RIC* 38b, 39b]; after 395 with the mint mark RM or RV, 4 of Honorius; 1 of John; 11 of Valentinian III) was 1.02 g. with a standard deviation of 0.10.

²⁰ Gaspar, at Washington University in St. Louis, used two analytical methods. The first was "Method 3" described by A. A. Gordus, "Quantitative Non-Destructive Neutron Activation Analysis of Silver in Coins," *Archaeometry* 10 (1967), pp. 78–86, in which a coin and a reference disk taped to its back are irradiated with neutrons produced by a plutonium-beryllium source. Radioactivity of silver-110 (half life, 24 seconds) and silver-108 (half life, 2.4 minutes) from the reference disk were used to correct the measurement of the radioactivity induced in the coin for the decrease in neutron flux caused by absorption within the coin. Because the coins submitted for analysis were small and not uniform in thickness, it was feared that the Gordus

tipling the percentage by the weight of the specimen. Mean values are given \pm standard error. If the value for no. 108, which we presume to be a contemporary forgery, is omitted, the mean percent silver for the Siliquae is $73.4 \pm 11.3\%$ and the total weight is 1.06 ± 0.26 g.

In the siliquae the proportion of silver varies from 60 to 90%, and in the half siliquae from 55 to 92%. Lowest of all was the percentage of silver in coin no. 108, which we think is a contemporary forgery not struck by the Vandals.²¹ Even though the tests were performed using

method would not give accurate results, particularly for the half siliquae; therefore, a second method was used. The reference disks were made as similar as possible to the coins being analyzed in order to equalize the effects of neutron self-shielding. The coins and standards were individually irradiated with neutrons and the induced radioactivity counted. The percent silver was calculated by comparing specific activities under the assumption that self-shielding was equalized in the coins and the standards:

$$\text{Percent silver} = \frac{(\text{activity in coin})}{(\text{weight of coin})} \div \frac{(\text{activity in reference disk})}{(\text{weight of reference disk})}$$

In both methods, coins were irradiated for one minute and a one minute counting period was begun 25 seconds after the end of irradiation. The radioactivity induced in each coin decayed to background within 15 minutes, and coins could thus be irradiated again within 20 minutes. Each measurement was repeated at least three times giving a minimum of four identical measurements per coin for each method used. The large probable errors of the values result from the low levels of radioactivity employed that gave net activities of about 1000 counts per minute with a background of about 500 counts per minute. Barrandon also used neutron activation with californium-252 as a source (J. N. Barrandon, J. P. Callu and C. Brenot, "The Analysis of Constantinian Coins (A.D. 313-340) by Non-destructive Californium-252 Activation Analysis," *Archaeometry* 19 [1977], pp. 173-86, and F. Dumas and J. N. Barrandon, *Le Monnayage de Philippe-Auguste*, Cahiers du Centre de Recherches Numismatiques E. Babelon [Paris-Valbonne, 1982]). Mauterer's analysis involved removing a small sampling from the edge of the coin (see n. 21 below).

²¹ W. Hahn bought this barbarous specimen in England together with several silver coins of Justinian from Carthage. He writes "Es sieht aber aus als wäre die Münze oberflächen gebeizt wenn nicht subaerat," and also informs us that Mauterer's analysis using the technique described in H. Ballezo, S. Karwiese, and R. Mauterer, "Anwendung der Korundstäbchenmethode auf Probleme der antiken Numismatik," *NZ* 93 (1979), pp. 41-43, and R. Mauterer and H. Ballezo, "Zerstörungsfreie Analyse Neue Wege bei der Bestimmung alter Münzen," *MÖNG* 20 (1977), pp. 46 et seq., showed that the coin contains 51.32% copper, 2.43% lead and 3.04% zinc in addition to the silver listed in Table 2.

TABLE 2
Analysis of Silver Content

<i>Cal. No.</i>	<i>Method</i>	<i>Silver</i>	<i>Total Weight (g)</i>
		<i>Percent</i>	
		SILIQUEAE	
5	G	88 ± 8	1.55
23	B	64.2	0.84
29	B	60.0	1.09
36	B	71.6	1.11
53	B	67.0	0.82
59	B	81.0	1.20
63	B	64.7	0.72
81	G	90 ± 5	1.45
86	B	60.5	0.97
99	G	87 ± 9	0.89
108	M	43.2	0.72
<i>Mean</i>		70.7 ± 13.9	1.033 ± 0.27
		HALF SILIQUEAE	
115	G	92 ± 8	0.63
129	G	55 ± 8	0.38
134	G	82 ± 10	0.48
<i>Mean</i>		76.33 ± 19	0.50 ± 0.10

different methods, it is apparent from the results that the bullion used for these issues was quite heterogeneous, and this is consistent with the idea that the coins were minted over a long period of time. Moreover, the heterogeneity in fineness suggests that the bullion came from a variety of sources, which must have included metal other than plate and earlier imperial coins, the most probable objects in silver taken as booty. Plate and fourth century imperial silver coins adhered to a much finer standard than that found in most of the Vandalic specimens.²²

²² The lowest percentage of silver in late Roman plate was 86.6%; all of the other objects listed by D. E. Strong, *Greek and Roman Gold and Silver Plate* (London, 1966), pp. 4 and 215–16, contained more than 92%. J. Werner, "Arbaldo ein merowingischer vir inluster aus der Provence?" in *Mélanges. . . J. Lafaurie* (Paris, 1980),

What are the direct prototypes of the Vandalic imitations? The Vandals were not the only barbarians who imitated imperial silver coinage, whether because it was plentiful in the territories in which they had come to settle, or because the Germans were fond of the white metal,²³ or for both reasons. One is reminded for instance of the rare coins of the Suevian king, Rechiarus, in the name of Honorius,²⁴ but even more of Frankish coinage of the second half of the fifth and the

p. 263, published a spectrographic analysis of a Byzantine plate from Valbonne (Bouches-du-Rhône) (E. Cruikshank Dodd, *Byzantine Silver Stamps*, Dumbarton Oaks Studies 7, [Washington, 1961], no. 91), and found it to contain 90.35% silver. Imperial silver coinage of the end of the fourth century following the Valentinian laws of 367 adhered to a high standard of purity (M. Amandry et al., "L'affinage des métaux monnayés au Bas-Empire: les réformes valentiniennes de 364-367," *Num-AntClas* 11 (1982, in press). R. Reece ("Some Analyses of Late Roman Silver Coins," *NC* 1963, pp. 241-42) reports that the content of silver in fourth century issues was stable and always exceeded 90%. Since the lower standard of fineness of the Vandal issues is almost certain to have been noticed in commerce, it may well be that the graffiti which appear on nos. 49 and 76 were put there in antiquity to indicate the fineness of the coins expressed in carats. Thus XV would signify 62.5% and XIII, 58.3% silver. For other instances in which graffiti express the intrinsic value of the alloy, see T. Gerasimov, "Byzantinische Goldmünzen mit Graphiten," *Byzantino Bulgarica* 5 (1978), pp. 123-46 (graffiti on debased hyperpers of the thirteenth and fourteenth centuries indicating the fineness of the coins in carats), and I. G. Dobrobolskij, I. V. Dubov, Io. K. Kuzbinenko, "Klassifikatsija i interpretatsija graffiti na vostochnikh monetakh (Kollektsija Ermitazha)," *Trudy Gosudarstvennogo Ermitazha* 21 (1981), pp. 53-89 (graffiti on oriental coins of the eighth to tenth centuries found in the U.S.S.R., some of which indicate the quality of the metal).

²³ Tac. *Germ.* 5.5. From the first century B.C. onward large quantities of Roman silver plate turn up in burials of barbarian chiefs (Strong, above, n. 22, pp. 125-28); a spectacular instance is the Sutton-Hoo treasure of the early seventh century (R. Bruce-Mitford, *The Sutton-Hoo Ship-Burial: A Handbook*, 3rd ed. [London, 1979] pp. 98-106). Hoards of "hacksilber," fragments of broken up table silver destined for the melting pot, are also common in Germany, Britain and Ireland dating from the fourth and fifth centuries (Strong, p. 182). See also G. L. Duncan, rev. of *Imperial Revenue, Expenditure and Monetary Policy in the Fourth Century A.D.*, ed. by C. E. King (Oxford, 1980), *NC* 1981, p. 202.

²⁴ X. Barral i Altet, *La circulation des monnaies suèves et visigothiques*, Beihefte der Francia 4 (Munich, 1976), p. 51 and pl. 20, 14. The Suevi also struck coins in gold with blundered legends in the name of Honorius and Valentinian III, some of which bear incised marks X or XI (X. Barral i Altet, "Monnaies suèves contre-marquées à la pointe," in, *Melanges . . . J. Lafaurie* [above, n. 2], pp. 249-56).

beginning of the sixth century.²⁵ The type that the Franks copied most often, however, is that of the Maxentian cult statue of Roma seated facing on a high-backed throne holding the globe in her right hand and a spear in her left, with the *VIRTUS ROMANORVM* legend.²⁶ Siliquae with this reverse were most abundantly struck at Treveri under Gratian.²⁷ The *VRBS ROMA* type favored by the Vandals was introduced at a later date, appearing on siliquae first in 378.²⁸

Imperial half siliquae with Victory advancing left and the inscription *VICTORIA AVG* or *GG* were initiated in the western half of the Empire during the last quarter of the fourth century.²⁹ They were never issued at an eastern mint. Theodosius struck half siliquae with his own portrait (*RIC* 38a) or with the portraits of Honorius (*RIC* 38b, 39b) or Arcadius (*RIC* 39a) at Milan. All but those of Honorius, which are quite rare, exist in only a few known specimens,³⁰ and may have been commemorative. After the death of Theodosius, Honorius continued to issue half siliquae at Rome and Ravenna with his own portrait or

²⁵ J. Lafaurie, "Monnaie en argent trouvée à Fleury-sur-Orne. Essai sur le monnayage d'argent franc des v^e-vi^e siècles," *Annales de Normandie* 14 (1964), pp. 173-222, and more recently for some corrections and additions *Cahiers des Annales de Normandie* 12 A (1980), p. 100, 106 (Envermeu hoard). This type is also copied on Frankish *argentei minuti* from a German find (Aldingen, Kr. Ludwigsburg) published by E. Nau, *Fundberichte aus Baden-Württemberg* 6 (1981), pp. 603-7. We owe this reference to the kindness of B. Overbeck, Munich.

²⁶ See above, n. 11.

²⁷ *RIC* 9, p. 25, 58.

²⁸ See J. W. E. Pearce, "Issues of the *Urbs Roma* Siliquae and Vota Siliquae of Gratian, Struck at Treveri," *NC* 1932, p. 247. J.-P. Callu, "Silver Hoards and Emissions from 324 to 392," in C. E. King, ed. (above, n. 23), p. 207; C. E. King, "A Hoard of Clipped Siliquae in the Preston Museum," *NC* 1981, p. 46.

²⁹ Pearce (above, n. 28), p. 262, and "A Half-Siliquae of the Treverian Mint," *NC* 1943, pp. 97-99; *RIC* 9, p. xxviii. For the persistence of Victory as a type in the West, especially amongst the barbarians, see W. J. Tomasini, *The Barbaric Tremissis in Spain and Southern France, Anastasius to Leovigild* ANSNM 152 (1964), pp. 12-44. It is curious that the Vandals chose pagan types for both of these imitations. Perhaps these images were used not only because they were familiar and well-established imperial types, but also because, by the third quarter of the fifth century, they were theologically neutral in the doctrinal conflict between the Arian Vandals and their Catholic subjects.

³⁰ O. Ulrich-Bansa, *Moneta Mediolanensis (352-498)* (Venice, 1949), pp. 190-92.

with that of Theodosius II (Plate 28, H6-8). After 423, John (C.3) and Valentinian III (C.11) continued to issue half siliquae first at Rome and Ravenna and, later, only at Ravenna. These are at least as plentiful as the earlier Milanese coins of Honorius, especially the half siliquae of Valentinian (Plate 28, H9-21). Issues by emperors after the death of Valentinian appear to be negligible.³¹

The exclusive choice of the Ravenna signature for the Vandalic imitations of both siliqua and half siliqua provides a clue to a more precise identification of the direct prototypes and hence a terminus post quem for the imitations. The fourth century Theodosian half siliquae seem to be excluded because none were struck at Ravenna, which attained preeminence amongst western imperial mints only in the 420s. Moreover, the *exact* Honorian prototype of the Vandalic siliqua must be extremely rare. Cohen did not illustrate the coin with the VRBS ROMA legend and the RVPS mint mark listed as F (Cabinet de France) (C. 70, exergue RVPS or ΔMPS). It may well have been one of the Vandalic siliquae (Ancien fonds 9743, 37 above, or 9744, 77 above), because the trays in Paris today contain no authentic imperial specimens. We have located only four specimens of an imperial siliqua of Honorius with Roma seated and the Ravenna mint mark.³² Three of these differ from the large number of Vandalic coins so far identified in the iconography of the reverse type, however: Roma sits on a throne and not on a cuirass and therefore represents the Maxentian rather than Hadrianic cult statue.

³¹ Cohen lists silver coins from Rome of Libius Severus (C.4) and Glycerius (C.4) with Victory I., and similar reverse inscriptions: Severus, VICTORIA AVG, and Glycerius, VICTORIA AVGGG, but no examples of the coin of Libius Severus were found at the ANS, Berlin, the Bibliothèque Nationale, the British Museum, Dumbarton Oaks, Milan or Munich. One specimen of C.4 of Glycerius is in the Cabinet des Médailles (Ancien fonds 9182, 1.14 g).

³² One specimen, in Copenhagen, is published in Morrisson (above, n. 2) pl. 52, A, p. 471. Three others are in the British Museum (PCR 1512 28/A/M, B 2937 and B 2938, Plate 28, S1-3). Still another is a cast in the British Museum; the whereabouts of the actual coin is unknown. In his inventory of "The Coinage of the Valentinian and Theodosian Periods," *NumCirc* 1931, J. W. E. Pearce describes a similar specimen (col. 204, no. 18), but he provides no illustration or reference. This is possibly one of the specimens now in the British Museum.

In the absence of an exact Honorian prototype for this *siliqua*, we suggest that the Vandals imitated the VRBS ROMA coins of John (C.9) or Valentinian III (C.46), which are likely to have been the more common imperial *siliquae* with this reverse type in circulation after 439 when the Vandals occupied Carthage. The *siliquae* of both of these later western emperors show Roma seated on a cuirass; on those of John (Plate 28, S4), she holds an undecorated staff characteristic of the later *siliquae* of Arcadius and Honorius,³³ and on those of Valentinian (Plate 28, S5, 6), the goddess holds an inverted spear with one barb (↓). Although the coin of John therefore seems to be closer to the Vandalic imitation,³⁴ we have not been able to examine enough specimens of either of these imperial coins to be sure.

The Vandals could in theory have imitated any of the half *siliquae* issued at Rome or Ravenna during the fifth century. Some specimens bear the reverse legend VICTORI-ΛΛVGG. Coins with GG must have been copied from prototypes dating to a period with only two *augusti*: possibly those of Honorius with Theodosius II (410–23), John with Theodosius (423–25), or Valentinian with Theodosius or Marcian (425–55), specimens of which were circulating in Italy at the middle of the fifth century as shown by the Fano hoard.³⁵ The reverse legend on other specimens of the Vandalic half *siliqua* contain only G. These coins appear more degenerate in style: the ruler's portrait is more primitive, and Victory more schematic and less mobile than on the specimens with inscriptions containing GG. While omission of a terminal letter might have been an engraver's error, it also could be an indication that this group of coins imitates a later imperial prototype. Inscriptions with G are recorded on Italian bronze from Ravenna

³³ Ulrich-Bansa (above, n. 30), p. 189.

³⁴ The *siliqua* of John (C.9) also appears to be quite rare. The specimen in the British Museum (PCR 1529), formerly in the Duke of Devonshire's collection and acquired in 1844 (1844–4–25–2593), appears to be a cast of the coin in the Cabinet des Médailles.

³⁵ *AJN* 5–6 (1958–59), p. 269: 17 gold coins, mainly *tremisses* from Theodosius I to Valentinian III and 25 silver coins from Valentinian I to Valentinian III out of which 18 were half *siliquae* of the latter (C.11) from Rome, Ravenna and Aquileia (distribution between the mints was not indicated). We are grateful to M. Jean Lafaurie for this reference.

under Zeno and Odovacar (476–93, *LRBC* 2, 587) and from Rome under Valentinian III (*LRBC* 2, 865, 868) and Leo I (457–65, *LRBC* 2, 869, 870).

CONCLUSIONS

Numismatic study of these Vandalic imitations clearly indicates a date of issue not before late in the first half of the fifth century, but this is of no help other than to confirm that they belong to the period after the Vandals captured Carthage in 439. Because the series is pseudonymous it cannot be attributed to a specific ruler on numismatic grounds alone. Historical arguments suggest, however, that the series was initiated by Gaiseric. The large number of dies used, as indicated by the relatively small number of die links in our analysis, show that both denominations were struck in large quantities.³⁶ How many years after the capture of Carthage it might have taken Gaiseric to accumulate sufficient bullion cannot be determined, but certainly by the time he seized Rome in 455 enough would have been available.³⁷ Accumulation of bullion alone would not account for minting by the Vandals,

³⁶ Applying I. D. Brown's formula ("Statistical Methods as a Tool in Numismatics," *Cornucopia* 3 [1975], pp. 33–44; "On the Use of Statistics in Numismatics," *Num-Circ* 1969, pp. 83–84) we estimated that 392 obverse dies were used for the siliqua. For the half siliqua, using G. F. Carter's equation ("A Graphical Method for Calculating the Approximate Total Number of Dies from Die-Link Statistics of Ancient Coins," in W. A. Oddy, ed., *Scientific Studies in Numismatics* [London, 1980]), we calculated the original number of obverse dies used was 109 and the number of reverse dies, 126.

³⁷ Procopius, *Vand.* 4.9.4–6 refers to "silver weighing many thousands of talents" (ἤν δὲ καὶ ἄργυρος ἐλκων μυριάδας ταλάντων πολλὰς) still in the Vandalic treasury at the time of Belisarius' conquest. See also *Le Liber Pontificalis*, ed. L. Duchesne (Bibl. des Écoles françaises d'Athènes et de Rome [Paris, 1886], vol. 1., p. 239). In the entry for Leo I (A.D. 440–61), "*Hic (Leo) renovavit post cladem Wandalicam omnia ministeria sacrata argentea per omnes titulos.*" In L. R. Loomis trans., *The Book of the Popes (Liber Pontificalis)* (New York, 1916), p. 100; Leo "replaced all the consecrated silver vessels in all the parish churches after the Vandal devastation." In addition to bullion, Gaiseric also returned from Rome with a more experienced staff: amongst the "*milia captivorum prout quique aul aetate aul arte placuerunt . . . Cartaginem abducta*" (Prosper, *MGH AA* 9, p. 484).

since, for the barbarians, minting was an innovation, and the initiation of a coinage implies a political or economic need for silver in this form. For all of these reasons, mid-century seems to be the earliest plausible date for the beginning of this series.

Does the choice of issuing the series falsely in the name of Honorius provide any clue to its dating? Barral i Altet³⁸ has reviewed the reasons why Rechiarius might have issued his coin with the obverse portrait of Honorius. The most plausible speculation given, that Honorius had earlier granted the Suevians the right to strike coins, would not of course apply to the Vandals. In addition, the Vandal coins differ from those of Rechiarius, as they also differ from the first coins of other barbarian kingdoms. Unlike the Suevian issue, which bears Rechiarius' name on the reverse, the Vandalic coins are unsigned. Unlike the unsigned coins of Odovacar, which were struck in the name of Zeno, a living Eastern emperor, the Vandals used the image of a ruler dead for at least a quarter of a century. Unlike the Frankish imitations, with generalized portraits of a Roman emperor who was not intended to be specifically identified, the emperor on the Vandal series and on the ANNO IIII(V) K (*BMC Van*, Huneric, nos. 1–2, pl. 1, 12) is Honorius.

The dynastic bonds that Gaiseric tried to establish with the family of Valentinian III, and possibly a desire for Roman legitimacy, may have prevented the king from infringing on the imperial monopoly. The "eternal peace" treaty, which recognized Vandal rule in Africa, provides a time for local minting.³⁹ We suggest that at some time between 455 and 476, Gaiseric began coining this series in the name of Honorius. Honorius could have been chosen because he was the last

³⁸ Barral i Altet (above, n. 21), pp. 51–52.

³⁹ Procopius, *Vand.* 3.7.26–30; see C. Courtois, *Les Vandales et L'Afrique* (Paris, 1955), especially discussion on p. 204. Courtois dates the "perpetual peace" treaty to 474 when the Emperor Zeno, at the beginning of his reign, sent the patrician Severus to Carthage to negotiate with Gaiseric (p. 204 and n. 3); 474 is also the year given by L. Schmidt ("The Sueves, Alans and Vandals in Spain, 409–429. The Vandals Dominion in Africa, 429–533" *CMH* 1 (1911), p. 311, and E. Stein, *Histoire du Bas-Empire*, 1 (Paris, 1959), p. 362 and n. 66, but J. B. Bury *History of the Later Roman Empire from the Death of Theodosius I to the Death of Justinian*, 2 (London, 1931), p. 124, gives 476 as the year Gaiseric concluded the treaty with the Roman government.

emperor to have struck silver of any quantity or quality,⁴⁰ because he was regarded as being the head of Valentinian's family, or because he was long since dead, and therefore the use of his portrait would be least likely to be perceived as a violation of the imperial monopoly by either a contemporary western or eastern emperor.

As a plausible hypothesis, we propose to place

1) the Honorius VRBS ROMA and VICTORIA AVG(G) series in the 470s at the end of Gaiseric's reign and extending through the reign of Huneric (477–84). During this period of time the weights of these coins would have been diminishing, the earliest specimens by being clipped, and those in the degenerate group of both denominations representing a later and lighter issue minted in the early 480s;

2) the Honorius/ ANNO IIII(V) K coins as a brief issue of Huneric (480/1). In general, this proposal conforms to Wroth's dating of the issues.⁴¹

Silver coins signed by Gunthamund (484–96) end this imitative series. Their issue marks the end of Teutonic provincialism and a turn toward acculturation and internationalism that is manifest in Vandal society in general and in the personalities of its later kings.⁴² In particular, their strict weight standardization is another instance of the monetary

⁴⁰ A detailed analysis of fifth century imperial silver coinage is needed, and remains to be undertaken. A major problem is its great rarity, even though silver appears to have been available in the west in the form of plate and in the Sasanian Empire as coin as indicated by the abundance of the contemporary issues of Peroz (459–84). In the Mediterranean world, silver coinage reached its nadir in the third quarter of the fifth century.

⁴¹ *BMC Van.*, pp. 2 and 5.

⁴² Procopius, *Vand.* 3.8.1–2, 6–9, 14. Sidonius, Panegyric on Majorian (delivered A.D. 458) "Sed ne fortasse latronix me clausam virtute putes, consumpsit in illo vim gentis vitae vitium" (*Carm.* 5.11.327–29): Roma is speaking of Gaiseric, "But lest haply thou think that I am securely hemmed in by the valour of the robber, know that in him the vileness of his vices has sapped the vigour of his race." See Courtois (above, n. 39), pp. 262–70; J. Lindsay, *Song of a Falling World, Culture during the Break-up of the Roman Empire (A.D. 350–600)* (London, 1948), pp. 208–14; Rosenbaum, *M. Luxorius, a Latin Poet among the Vandals* (New York, 1961), pp. 3–35. For a summary of the period after the "perpetual peace" which Gaiseric concluded with the Roman government in 476, see J. B. Bury (above, n. 39), pp. 124–28.

reform that was also occurring at the same time in Italy and at Constantinople.⁴³

PROTOTYPES

Both obverse and reverse types are similar to the Vandalic issues. In addition to Ravenna (RVPS and RV), the imperial coins are from Milan (MD) or Rome (RMPS or RM) as noted.

SILICVAE

- *S1. 1.67 g. Honorius/RVPS. British Museum 38/A/M; R. A. G. Carson, *Principal Coins of the Romans*, vol. 3, *The Dominate A.D. 294-498* (London, 1981), 1512.
- *S2. Honorius/RVPS. British Museum B 2938.
- *S3. Honorius/RVPS. British Museum B 2937.
- *S4. 2.54 g. John/RVPS. Bibliothèque Nationale 9757.
- *S5. ↑ 1.54 g. Valentinian III/RMPS. British Museum. Pierced.
- *S6. Valentinian III/MP. Basel Münzhandlung 8, 23 March 1937, 1111.

HALF SILICVAE

- *H1. ↓ 1.00 g. Honorius/MD. British Museum; Carson (above, S1) 1502.
- *H2. ↓ 1.07 g. Honorius/MD. Berlin.
- *H3. ↓ 1.06 g. Honorius/MD. Vienna 29, 586.
- *H4. 1.03 g. Honorius/MD. Vienna 33302.
- *H5. 1.05 g. Honorius/MD. Bibliothèque Nationale 9731.
- *H6. 1.13 g. Honorius/RM. Bibliothèque Nationale 9730.
- *H7. 0.92 g. Honorius/RM. Hess/Leu, 24 April 1969, 41, 710.
- *H8. ↑ 0.93 g. Honorius/RV. Munich.
- *H9. 0.81 g. John/RV. Bibliothèque Nationale 9758.

⁴³ P. Grierson (above, n. 1), pp. 77-80; F. Clover (above, n. 1); H. L. Adelson and G. L. Kustas, *A Bronze Hoard of the Period of Zeno I*, ANSNNM 148 (1962), pp. 17-35; R. P. Blake, "The Monetary Reform of Anastasius I and Its Economic Implications," in *Studies in the History of Culture* (New York, 1942), pp. 84-97; D. M. Metcalf, *The Origins of the Anastasian Currency Reform* (Amsterdam, 1969), pp. 8-15.

- *H10. 1.01 g. Valentinian III. Dumbarton Oaks, DO 55.694; Pearce bought from J. Schulman, October 1931.
- *H11. Valentinian III. Dumbarton Oaks, DO 6423/3; ex Münz. u. Med. 17, 2-4 Dec. 1957, 646.
- *H12. 0.84 g. Valentinian III. Bibliothèque Nationale 9681A.
- *H13. ↘ 1.10 g. Valentinian III. British Museum.
- *H14. 0.93 g. Valentinian III. Berlin 8595.
- *H15. 1.13 g. Valentinian III. Berlin 28340.
- *H16. ↗ 0.94 g. Valentinian III. British Museum.
- *H17. 0.88 g. Valentinian III. Bibliothèque Nationale 9774.
- *H18. ↑ 1.12 g. Valentinian III/RM. British Museum.
- *H19. ↓ 1.25 g. Valentinian III/RM. British Museum.
- *H20. ↑ 0.97 g. Valentinian III/RM. Munich.
- *H21. 0.88 g. Valentinian III/RV. Bibliothèque Nationale 9775.

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A NEW ISSUE OF KING NEZOŌL OF AKSUM
IN THE COLLECTION OF
THE AMERICAN NUMISMATIC SOCIETY

STUART MUNRO-HAY

The American Numismatic Society has a gold tremissis of King Nezoōl which is, as far as I am aware, a unique type.¹ The coin, whose provenance runs no further back than "an Istanbul dealer," is referred to below as Nezoōl *Λ* 2 to distinguish it from the well-known *Λ* 1, where the reading of the royal name was established by Buttrey.² The variant type of the obverse reinforces the comments of Buttrey about the need to look at the chronology of the Aksumite gold issues as dated by Anzani³ and others from the fourth to the sixth centuries A.D. This has been undertaken elsewhere⁴ in as thorough a manner as possible, and here attention will be called only to the new type and its closest allies stylistically.

¹ ANS 1977. 158.1350. I thank Michael Bates, Curator of Islamic Coins, for helping in my investigations at the ANS in 1977.

² T. V. Buttrey, "Axumite Addenda," *Rassegna di Studi Etiopici*, vol. 25 (1971-72), p. 44ff., particularly pp. 48-50. The numerical listing—*Λ* 1, *Λ* 2, etc.—within a reign has no chronological significance.

³ A. Anzani, "Numismatica Axumita," *RIN* 39 (1926), pp. 5-110.

⁴ S. C. Munro-Hay, "The Chronology of Aksum . . ." (Ph. D. diss., School of Oriental and African Studies, University of London, 1978).

Nezoöl's A 1 type depicts the king on the obverse wearing the Aksumite crown composed of upright spikes divided by arches, each arch surmounted by an element rather like the central element of the ancient Egyptian *atf* crown, which is in turn surmounted by a disc. There is a band or fillet at the back of the neck; the king's robes are shown in conventionalized folds, and the bust finishes at the arm, which is adorned with bracelets and armlets. Surrounding the bust are stalks of barley, one on each side. Directly above the king's head is a cross. The legend begins to the right of the cross, reading ΘΕΟYΕΥΧΑΠΙCΤΙΑ.



Nezoöl A 1



Nezoöl/Nezana A 2



Anonymous A 2



Nezana A 1



The reverse follows the Aksumite tradition of depicting the king in another type of headgear. He wears a kind of helmet or headcloth with three rays springing from the forehead, rather like an aigrette or perhaps the stretching lines of the cloth, again with the fillet at the back of the neck. The arm, bejewelled with bracelets and armlets, holds what appears to be a rather degenerate form of the mysterious item of regalia borne by earlier kings of Aksum on the reverse of their coins. This is a flail-like object, depicted in earlier reigns as a drooping stick with smaller branches falling from it, each ending with a disc. By Nezoöl's time it resembles merely a small stick. The reverse, like the obverse, has stalks of barley, but the legend reads ΒΑCΙΑΕVCNEΖΩΛΑ.

The reverse type of Nezoōl A 2 is essentially the same as that of his A 1. It is the obverse that is startling. The king is shown as usual, surrounded by the barley stalks and with a cross above his head; however, directly in front of the king's neck, and within the central field created by the surrounding barley stalks, is the Ge'ez letter M, ∞, and the legend around the coin reads +CᵀI+CΛX+ACA+CΛC instead of ΘEOYEYXAPICTIA.

This obverse is exactly the same—apparently the same die—as the obverse of Nezana, A 2, published by Anzani as his number A.177. A different die, but with the features in all respects the same, was used for the striking of an anonymous gold type, published by Buttrey as his number 2, Glendining, 2 February 1972, 104. All these coins, as Buttrey saw, belong to the very rare type of Aksumite gold without a beaded inner circle. According to the numerical designations given in my study of these coins, the circle is lacking only in Ousas A 2; Ousana A 1 and A 1a; Nesanna A 1, 2, and 3; anonymous A 2; and Nezoōl A 1 and 2. The four crosses in the legend first appeared on coins of Ēzanas.⁵

Buttrey⁶ comments on the anonymous piece (here anon. A 2), saying that it and its associated pieces should be moved ahead in the relative chronology. Of this there is no doubt, and the order of these coins has been completely rearranged in my recent attempt to present the series in a more logical fashion. Confirmation for the rearrangement has been found through a measurement of the specific gravities of the entire Aksumite series.⁷ Buttrey also comments that the anonymous A 2 piece is "either an anonymous issue of Nezana, or falls immediately adjacent to one of his issues, A.177." The new coin of Nezoōl under consideration shows that anonymous A 2 could equally be an anonymous issue of Nezoōl.

These three closely linked issues, Nezana A 2, anonymous A 2, and Nezoōl A 2, all bear the same uncertainly deciphered legend on

⁵ With Ēzanas, of course, the inner beaded circle also began for his Christian issues, though a partial circle is found on Wazeba, A 1.

⁶ Buttrey (above n. 2), p. 48.

⁷ W. A. Oddy and S. C. Munro-Hay, "The Specific Gravity Analysis of the Gold Coins of Aksum," in D. M. Metcalf and W. A. Oddy, eds., *Metallurgy in Numismatics* 1 (London, 1980).

their obverses as the coins of the other gold series with inner beaded circles: Eōn Bisi Anaaph, anonymous *A* 1, and Esbaēl. This feature makes it far more likely that all these coins belong in one sequence, not widely separated in time as Anzani had placed them. This is not the place to go into questions of style, comparison of specific gravities, or any of the other details which tend to confirm this association; it must suffice to say that there can be little doubt that all these coins belong in the fourth and fifth centuries, between the reigns of Ēzana(s) and Kalēb.

To return to Nezana and Nezoōl, who are only attested numismatically, only Nezana has a silver issue. The Nezana silver, *A* 1, has the simple headcloth type of royal bust on the obverse, with a monogram after the style of the South Arabian kings at top. To the right begins the legend NEZA NABA, Nezana Ba(sileus). The reverse bears an elaborate cross, with a gilded center, which divides the field into four. In each quadrant, starting at 12:00, are two letters of the legend OE OY XA PI. The legend is a variant of the legends ΘEOYEYXAPICTIA used by Ousas (*A* 1, 1a and 2), Ousanas (*A* 1), Ousana (*A* 1 and 1a), Nezana (*A* 3), and Nezoōl (*A* 1), although it sometimes reads ΘEOY XAPIC or ΘEOYIA EYXAPIC. Perhaps in the shortened versions the cross at 12:00, found in all these types, stands for the T missing from ΘEOYEYXAPICTIA, and the OE OY XAPIC type may be an even more abbreviated rendering.

This use of the legend helps to confirm the placing of the Nezana *A* 1 type in the period under discussion. The same Nezana is evidently the issuer. The important point is the Ge'ez monogram. It has been interpreted, surely incorrectly, by Anzani to read NZN, Nezana. The letters ʾሰሰ must be seen in the monogram to provide NZN; but the monogram distinctly has NZWL, the form ʾሰ on the best-preserved examples. From this the letters ʾሰ፱፯, NZWL, can much more logically be extracted. Could it, then, be possible that the monogram of Nezoōl, perhaps the son and heir of Nezana, appeared on Nezana's silver issue, or even that there was some sort of association of rule? Whatever the case, a striking confirmation of the closeness of the two kings in time is indicated by the new Nezoōl *A* 2 and its relationship with Nezana *A* 2 and the anonymous type *A* 2.

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A NINTH CENTURY DIRHAM HOARD FROM DEVITSA IN SOUTHERN RUSSIA

THOMAS NOONAN

Dedicated to the memory of Aleksei Andreevich Bykov (1896–1977)

In the summer of 1939, a treasure hoard was found at a site called Gypsies' Ravine near the village of Devitsa, Korotoiak raion, Voronezh oblast. Devitsa is located twelve kilometers north of Korotoiak and five kilometers southwest of the village of Uryv along the Devitsa River, a tributary of the Don River. The hoard was obtained, apparently intact, by the Voronezh Museum, and consisted of 299 whole and 24 fragments of silver oriental coins, a silver finger-ring with a flat carnelian mounting, and several pieces of silver jewelry from a belt assemblage. The ring and jewelry were kept by the Voronezh Museum while the 323 coins were sent to the Hermitage Museum in Leningrad for study by A. A. Bykov, Keeper of the Oriental Coins in the Coin Cabinet of the Hermitage and a student of the famous Richard (Roman Romanovich) Fasmer/Vasmer.

By 1940, Bykov had identified all the coins in the Devitsa hoard and in early 1941 published a brief, preliminary report on them.¹ His short account noted that the hoard contained Sasanian, Umayyad, 'Abbāsid, and Idrīsid coins of the sixth through the ninth centuries as well as a

¹ A. A. Bykov, "Novaia nakhodka kuficheskikh monet," *Kratkie soobshcheniia Instituta istorii material'noi kul'tury* 8 (1940), p. 119.

few issues struck in the late eighth century by the Arab governors of Iran. The most recent coin was a dirham of 223 H./A.D. 837–8. Bykov also mentioned that the Devitsa hoard was rather rich in counterfeit 'Abbāsid dirhams which, prior to this time, were only known from the two examples in the Zavalishino hoard.² He concluded by announcing that he was preparing a detailed study of the composition of the Devitsa hoard including a description of its most interesting coins.

Bykov's plans were interrupted by the German invasion of the Soviet Union in June 1941. The Devitsa hoard along with other materials in the Coin Cabinet's collection was hurriedly packed and evacuated from Leningrad for safekeeping. In October 1945 the Devitsa hoard, along with the other collections of the museum, was returned to the Hermitage; but Bykov had become occupied with the restoration of the coin collection and other projects, and the Devitsa hoard was all but forgotten. Then, in late 1966, Bykov resumed his study of the hoard at the request of A. N. Moskalenko of the Voronezh Museum who needed more information about it for her own research. The description of the hoard prepared earlier had been lost during the war so Bykov had to identify all the coins again.³

On studying the dirhams in the Devitsa hoard for a second time, Bykov concluded that he had made a mistake in his initial, 1940 identification of the so-called counterfeits. These coins were neither genuine nor counterfeit 'Abbāsid dirhams according to Bykov, but were, he believed struck by the Khazars during the first-half of the ninth century. Bykov then went on to propose three consecutive stages in the emergence of Khazar coinage:

- 1) the earliest Khazar coins were crude imitations of Islamic dirhams probably struck in the early ninth century;

² R. R. Fasmer, *Zavalishinskii klad kuficheskii monet VIII-IX v.*, *Izvestiia Gosudarstvennoi Akademii istorii material'noi kul'tury*, Tom 7, Vyp. 2 (Leningrad, 1931), p. 7, nos. 46, 47.

³ Bykov described his study of the Devitsa hoard in his posthumous work, "Zagadochnye monety Devitskogo klada: Iz zapisok starogo numizmata," *Izvestiia Akademii Nauk Estonskoi SSR/Eesti NSV Teaduste Akadeemia*, Obshchestvennye nauki/Ühiskonnateadused, 1980, no. 1, pp. 79–86.

- 2) these crude imitations gave way to more perfected types like those found in the Devitsa hoard;
- 3) the final stage came when the Khazars struck their own dirhams at the mint of Arḍ al-Khazar in 223/837–8.

The third stage was short lived apparently because some change in Arab-Khazar relations led the Khazars again to use Islamic dirhams imported from the Near East for their monetary transactions.

The purpose of this work is not to examine Bykov's thesis about the existence of a Khazar coinage. Those interested in the Khazar dirhams, which I have called irregular 'Abbāsid dirhams, should read Bykov's argumentation which has been published in several reports.⁴ Because of his preoccupation with these dirhams, Bykov never published the detailed account of the entire hoard which he had promised in 1940. His later reports, which focused upon these irregular 'Abbāsid issues, only provided a few basic facts about the Devitsa hoard as a whole: the total number of coins, the dates of the earliest and most recent coins (551 and 837/8), and the dynastic breakdown of the 237 regular coins (5 Sasanian, 17 Umayyad, 1 Umayyad governors of the eastern regions, 206 'Abbāsid, 1 'Abbāsid governors of Ṭabaristān, 1 governors of Tudgha, 2 Idrīsid, 1 Aghlabid, and 3 imitation 'Abbāsid dirhams). Besides Bykov's studies, only two other numismatic works known to me have described the Devitsa hoard. In 1949, E. A. Pakhomov noted that the hoard contained the following silver coins: 5 Sasanian, 1 Umayyad governors of Iran, 1 Ṭabaristān, 17 Umayyad, 296 'Abbāsid, 2 Idrīsid, and 1 governors of Tudgha. Pakhomov also made specific mention of the following Transcaucasian dirhams in the hoard: 1 Umayyad coin, Armīniyah, 105/723–4; 2 whole Abbāsid coins, Armīniyah, 149/766–7 and 217/832–3; 1 'Abbāsid coin fragment, Armīniyah, 161/

⁴ A. A. Bykov, "Devitskii klad kuficheskikh monet," *Tezisy dokladov nauchnoi sessii Gosudarstvennogo Ermitazha, Noiabr' 1967 g.* (Leningrad, 1967), pp. 66–69; "O khazarskom chekane VIII-IX vv.: Doklad na III vsesoiuznoi konferentsii Arabistov," *Trudy Gosudarstvennogo Ermitazha*, Numizmatika, vol. 4, pt. 12 (1971), pp. 26–36; "Iz istorii denezhnogo obrashcheniia Khazarii v VIII-IX vv." *Vostochnye istochniki po istorii narodov Iugo-vostochnoi i Tsentral'noi Evropy*, 3 (1974), pp. 26–71; "Zagadochnye monety" (above, n. 3).

777–8, and 1 whole ‘Abbāsid coin, Mādīnat Arrān, 208/823–4.⁵ More recently, in 1971, V. V. Kropotkin published a brief account of the hoard based on Bykov’s published reports, but his account contained no new information.⁶ Thus, aside from the concrete data on a few Transcaucasian dirhams, relatively little is known about the non-“Khazar” coins in the Devitsa hoard beyond Bykov’s very general comments.

Some years ago, while conducting research on dirham hoards found in European Russia, I was able to examine Bykov’s data on the 235 regular coins from the Devitsa hoard in the Hermitage Coin Cabinet. By combining Bykov’s listing of the 235 regular dirhams with his detailed studies on the 86 irregular ‘Abbāsid dirhams (the remaining two or three coins being imitations), a picture of the hoard as a whole emerges. This hoard is important numismatically because some time around 825–33, the composition of Eastern European dirham hoards changed as North African coins began to disappear from the hoards. Although this fundamental change can be seen in hoards from the 820s and the 840s, study of this phenomenon has been handicapped by the fact that no substantial hoard dating to the 830s found in European Russia has yet been published. Consequently, the publication of Bykov’s data on the regular dirhams in the Devitsa hoard helps to remedy a major lacuna in the numismatic evidence. It is to be hoped that our Soviet colleagues will eventually publish a complete and exhaustive analysis of the Devitsa hoard.

In the second part of this study, a comparative examination of the Devitsa hoard is provided so that the hoard can be seen against the broader background of monetary circulation in Eastern Europe, the Caucasus, and the Near East. The publication of Bykov’s data along with this analysis should make the Devitsa hoard better known and provide scholars with sufficient information so that it can be incorporated, at least partially, into their research.

⁵ E. A. Pakhomov, *Monetnye klady Azerbaidzhana i drugikh respublik, kraev i oblastei Kavkaza*, Vypusk 4 (Baku, 1949), p. 93, no. 1301.

⁶ V. V. Kropotkin, “Novye nakhodki sasanidskikh i kuficheskikh monet v Vostochnoi Evrope,” *Numizmatika i epigrafika* 9 (1971), p. 79, no. 20.

THE COMPOSITION OF THE DEVITSA HOARD

1. SASANIAN (5)

1. Khusraw I, 21st year/551
2. Khusraw II, 23rd year/612
3. as 2, 28th year/617
4. as 2, 29th year/618
5. as 2, 31st year/620

2. Umayyad Governors of the Eastern Provinces (1)

6. al-Hajjāj b. Yūsuf, 78/697–8

3. Umayyad (17)

7. Armīniyah, 105/723–4
8. al-Baṣrah, 80/699–700
9. as 8, 100/718–9
10. as 8, 128/745–6
11. Dimashq, 81/700–1
12. Kirmān, 103/721–2
13. Wāsiṭ, 86/705
14. as 13, 93/711–2
15. as 13, 105/723–4
16. as 13, 107/725–6
17. as 13, 116/734–5
18. as 13, 117/735–6
19. as 13, 119/737
20. as 13, 122/739–40
21. as 13, 123/740–1
22. as 13, 125/742–3
23. as 13, 128/745–6

4. ʿABBĀSĪD (206)

al Maṣṣūr

24. Armīniyah, 149/766–7
25. al-Baṣrah, 136/753–4
26. as 25, 147/764–5
27. as 26
28. al-Rayy, 147/764–5
29. al-ʿAbbāsīyah, 152/769–70
30. al-Kūfah, 144/761–2
31. [al-Muḥamm]adīyah, 155/771–2
32. Madīnat al-Salām, 149/766–7
33. as 32, 152/769–70
34. as 32, 153/770
35. as 34
36. as 34
37. as 34, 156/772–3
38. as 37
39. as 37, 157/773–4
40. as 37, 158/774–5
41. as 40

al-Mahdī

42. mint?, [155–70]/771–87, fragment⁷
43. Armīniyah, 161/777–8
44. Madīnat Jayy, [1]62/778–9
45. al-ʿAbbāsīyah, 160/776–7
46. as 45
47. as 45, 161/777–8
48. as 45, 163/779–80
49. as 45, 164/780–1
50. as 45, 165/781–2
51. as 45, 166/782–3
52. as 45, 167/783–4

⁷ Bykov tentatively assigned this dirham to the reign of al-Mahdī.

- 53. as 45, 168/784-5
- 54. as 45, 169/785-6
- 55. [al-ʿAbbāsīyah?], 16x/776-86^a
- 56. al-Muḥammadīyah, 161/777-8
- 57. as 56, 166/782-3
- 58. Madīnat al-Salām, 161/777-8
- 59. as 58
- 60. as 58
- 61. as 58, 162/778-9
- 62. as 61
- 63. as 61
- 64. as 61, 163/779-80
- 65. as 61, 164/780-1
- 66. mint effaced, 168/784-5

al-Hādī

- 67. Ifrīqiyah, 170/786-7
- 68. Kirmān, 169/785-6

al-Rashīd

- 69. Ifrīqiyah, 172/788-9
- 70. as 69, 176/792-3
- 71. Madīnat Bukhārā, 193/808-9
- 72. al-Baṣrah, 181/797-8
- 73. Madīnat Balkh, [181-82]/797-99
- 74. as 73, 189/804-5
- 75. as 74
- 76. as 74
- 77. as 74, 190/805-6
- 78. al-Rāfiqah, 192/807-8
- 79. Madīnat Zaranj, 189/804-5
- 80. Sijistān, 170/786-7
- 81. al-Mubārakah, 179/795-6
- 82. al-Muḥammadīyah, 172/788-9
- 83. as 82, 181/797-8

^a Bykov tentatively assigned this dirham to the reign of al-Mahdī.

- 84. as 83
- 85. as 83, 182/798-9
- 86. as 83, 183/799-800
- 87. as 86
- 88. [al-Muḥammadiyah], 1[82-85]/798-802
- 89. as 88, [183-86]/799-802
- 90. al-Muḥammadiyah, 186/802
- 91. as 90, 189/804-5
- 92. as 90, 193/808-9
- 93. Madīnat al-Salām, 179/795-6
- 94. as 93, 180/796-7
- 95. as 94
- 96. as 94
- 97. as 94, 181/797-8
- 98. as 97
- 99. as 97, 185/801-2
- 100. as 97, 187/802-3
- 101. as 97, 190/805-6
- 102. as 97, 191/806-7
- 103. as 102
- 104. as 102, 192/807-8
- 105. as 102, 193/808-9
- 106. as 105
- 107. Miṣr, 180/796-97

al-Amīn

- 108. Madīnat Bukhārā, 194/809-10
- 109. Madīnat Balkh, 194/809-10
- 110. Madīnat Samarqand, 194/809-10
- 111. as 110
- 112. Madīnat al-Salām, 193/808-9
- 113. as 112, 194/809-10
- 114. as 113
- 115. as 113, 195/810-1
- 116. as 113, 196/811-2

al-Ma'mūn

117. Madīnat Arrān, 208/823–4
118. Armīniyah, 217/832–3
119. Madīnat Iṣbahān, 197/812–3
120. as 119, [19]7/812–3
121. as 119, 199/814–5
122. as 119, 203/818–9
123. as 119, 205/820–1
124. as 119, 207/822–3
125. as 119, 208/823–4
126. Dimashq, [2]11/826–7
127. Madīnat Samarqand, 197/812–3
128. as 127
129. as 127
130. as 127, 201/816–7
131. Samarqand, 203/818–9
132. [Samarqand], 203/818–9
133. Samarqand, 204/819–20
134. as 133, 206/821–2
135. as 133, 208/823–4
136. as 133, 209/824–5
137. as 133, 217/832–3
138. as 137
139. as 137
140. as 137, [2]17/832–3
141. Madīnat Samarqand, 217/832–3
142. as 141, 218/833–4
- 143–45. as 142 (three fragments)
146. al-Shāsh, 217/832–3
147. as 146
148. al-Muḥammadiyah, 198/813–4
149. as 148, 218/833–4
150. Madīnat al-Salām, [19]8/813–4
151. as 150, 200/815–6
152. as 150, 204/819–20
153. as 150, 207/822–3

- 154. as 153
- 155. as 153, 217/832-3
- 156. as 153, 218/833-4
- 157. Marw, 214/829-30
- 158. as 157, 215/830-1
- 159. as 157, 216/831-2
- 160. Madīnat Herāt, 206/821-2
- 161. as 160
- 162. as 160
- 163-64. Mint effaced, third century/815-912

al-Ma'mūn or al-Mu'taṣim

- 165. [Samar]qand, 21x/825-35.
- 166. al-Shāsh, 218/833-4

al-Mu'taṣim

- 167. Samarqand, 219/834-5
- 168. [Samarqand], 219/834-5
- 169. Samarqand, 220/835
- 170. as 169
- 171. as 169
- 172. as 169
- 173. as 169, 2[20]/835
- 174. as 173
- 175. as 173, [220]/835
- 176. as 175
- 177. as 175
- 178. [Samar]qand, 220/835
- 179. as 178
- 180. Samarqand, 221/835-36
- 181. as 180
- 182. as 180
- 183. as 180
- 184. [Samarqand], 221/835-6
- 185. Samarqand, [22]1/835-6
- 186. as 185, 22[1]/835-6
- 187. as 185, 22x/835-42

188. [Samar]qand, 22x/835–42
189. Samarqand, year effaced
190. Samar[qand], year effaced
191. al-Shāsh, 219/834–5
192. as 191, 220/835
193. as 192
194. as 192, [220]/835
195. as 194
196. [al-Sh]āsh, [2]20/835
197. al-Shāsh, [2]20/835
198. as 197, 220/835
199. as 198
200. [al-Shā]sh, [2]20/835
201. al-Shāsh, [2]20/835
202. [al]-Shāsh, [220]/835
203. al-Shāsh, [220]/835
204. as 203, 223/837–8
205. as 204
206. [al-Sh]āsh, [2]23/837–8
207. al-Shāsh, 2[2]3/837–8
208. as 207, 22[3]/837–8
209. as 207, 223/837–8
210. as 209
211. as 209
212. as 209
213. al-Muḥammadiyah, 222/836–7
214. as 213, 223/837–8
215. as 214
216. Marw, 219/834–5
217. as 216, [21]9/834–5
218. as 216, 220/835
219. as 218
220. as 218, 223/837–8
221. as 220
222. as 220, 22[3]/837–8
223. Miṣr, 220/835
224. Maʿdin [al-Shāsh?], [2]19/834–5

225. Mint?, 219/834–5
 226–27. Mint and year effaced

Third Century H./815–912

- 228–29. Mint and year effaced

5. 'ABBĀSID GOVERNORS OF ṬABARISTĀN (1)

230. 'Umar b. al-'Alā, 124/775⁹

6. GOVERNORS OF TUDGHA (1)

231. Halaf, Tudgha, 175/791–2

7. IDRĪSID (3)

Idrīs I

232. Tudgha, 1[7]4/790–1

Idrīs II

233. al-'Alīyah, 210/825–6

Ruler?

234. Tudgha, effaced

8. AGHLABID (1)

235. Ibrāhīm, al-'Abbāsiyah, 166/782–3¹⁰

9. IMITATION 'ABBĀSID (2)¹¹

- 236–37. Imitations of 'Abbāsid dirhams

⁹ The date according to the post-Yazdagard era, not the Hijra date, is 124.

¹⁰ Since Ibrāhīm ruled from 184 to 197 H., the date 166 cannot be correct, probably the result of my copying error. A more accurate date would no doubt be 186/802 or 196/811–2.

¹¹ Bykov (above, n. 4, "Iz istorii," p. 30) lists two Idrīsid dirhams and three imitations of 'Abbāsid dirhams. The data I examined included three Idrīsid dirhams and no imitations. My calculations are based on three Idrīsid dirhams and two imitation 'Abbāsid dirhams.

10. IRREGULAR 'ABBĀSID OR KHAZAR (86)

Among the coins in the Devitsa hoard, Bykov identified 86 very strange dirhams. According to him these coins differ significantly from regular 'Abbāsid dirhams. Based on his long and careful study of these coins, he concluded that they were struck by the Khazars. While Bykov raises some very interesting points about the authenticity of these 86 dirhams, his attribution of them to the Khazars has not been universally accepted and should probably be considered tentative at this time. Consequently, it is best to label them as "irregular 'Abbāsid dirhams" until their provenance has been conclusively established.¹²

Bykov divided these 86 dirhams into twelve types. I have followed his typology and have attempted to describe these curious coins in some detail. However, the interested reader should consult Bykov's full argumentation and his photos of these coins found in "Iz istorii," between pages 32 and 33.

238. (1a) al-Ma'mūn, Madīnat al-Salām, 103 H., 1 coin, 3.72 g

The date 103/721–2 falls within the Umayyad era while the 'Abbāsid Caliph al-Ma'mūn began his reign in 195/810–1. In addition, Madīnat al-Salām did not become the 'Abbāsid capital until 145/762–3.

239. (1b) al-Ma'mūn, Madīnat al-Salām, 104 H., 1 coin, 2.42 g

240–47. (2) Madīnat Sarqand (= Samarqand), 108 H., 8 coins, 2.73–4.82 g

The Umayyad Caliph Hishām ruled in 108/726–7, but the reverse of this type names al-Mahdī as the heir to the 'Abbāsid Caliph al-Manṣūr, i.e. it dates from ca. 145/762–3 to 158/774–5.

248. (3) Wāsiṭ (= Wāsiṭ), 119 H., 1 coin, 3.06 g

The date on the obverse is 119/737 while the reverse corresponds to dirhams from the reign of al-Manṣūr, 754–75.

¹² Bykov's arguments about the supposed Khazar dirhams are examined in T. Noonan, "Did the Khazars Possess a Monetary Economy? An Analysis of the Numismatic Evidence," *Archivum Eurasiae Medii Aevi*, vol. 2 (forthcoming), and by M. Czapkiewicz in *Folia Orientalia*, 15 (1974), pp. 306–10.

- 249-78. (4) Wāsiṭ (= Wāsiṭ), 119 H., variant, 30 coins, 2.13-4.32 g
The obverse with the date 119/737 does not correspond to the legend on the reverse which refers to Faḍl b. Sahl, the leading official under al-Ma'mūn during the 810s.
279. (5) Wāsiṭ (= Wāsiṭ), 125 H., 1 coin, 2.24 g
The date on the obverse, 125/742-3, does not correspond to the reverse which comes from a type of the 'Abbāsīd Caliph al-Manṣūr, 136-59/754-75.
280. (6) al-Kūfah, 142 H., 1 coin, 3.47 g
The obvious mistakes in orthography and calligraphy on this dirham are not found on other dirhams struck in al-Kūfah in 142/759-60.
281. (7) al-Baṣrah, 144 H., 1 coin, 2.79 g
This dirham differs in several ways from other dirhams struck in al-Baṣrah in 144/761-2.
282. (8) A[l]-Muḥammadiyah (= al-Muḥammadiyah), 150 H., 1 coin, 2.84 g
This dirham differs in several ways from other dirhams struck in al-Muḥammadiyah in 150/767-8.
283. (9) [al-Muḥamma]diyyah, 150 H., 1 coin, 3.41 g
This coin was struck twice—the obverse and reverse dies were used on each side.
284. (10) al-Ḥammadiyah (= al-[Mu]ḥammadiyah), 150 H., 1 coin, 3.29 g
The two major mistakes in the legends—in the names of the mint and the heir to the throne—show that this coin could not have been struck in an 'Abbāsīd mint.
- 285-322. (11) al-Muḥammadiyah, 150 H., variant, 38 coins, 1.92-3.67 g
The obverse, dated 150/767-8, does not correspond to the reverse which refers to Faḍl b. Sahl, al-Ma'mūn's leading official in the 810s.
323. (12) Madīnat al-Salām, 162 H., 1 coin, 3.37 g
The date on the obverse, 162/778-79, does not correspond to the reverse which is characteristic of al-Manṣūr's era, 136-58/754-75.

As mentioned in note 11, there is a discrepancy in the dynastic components of the Devitsa hoard as related in various reports—were there two Idrīsīd and three imitation 'Abbāsīd dirhams, or were there three Idrīsīd and two imitation 'Abbāsīd dirhams? Using the latter attributions, the Devitsa hoard has the following dynastic composition.

TABLE 1
Coins in the Devitsa Hoard by Dynasty

	<i>Number</i>	<i>% of Total</i>
<i>Sasanian</i>	5	1.5
<i>Umayyad Governors</i>	1	.3
<i>Umayyad</i>	17	5.3
<i>ʿAbbāsīd</i>	206	63.8
<i>ʿAbbasid Governors of Ṭabaristūn</i>	1	.3
<i>Governors of Tudgha</i>	1	.3
<i>Idrisid</i>	3	.9
<i>Aghlabid</i>	1	.3
<i>Imitation ʿAbbāsīd</i>	2	.6
<i>Irregular ʿAbbāsīd</i>	86	26.6
<i>Total</i>	323	99.9

In brief, the Devitsa hoard consists of over 90% ʿAbbāsīd and “irregular” ʿAbbāsīd dirhams.

In calculating the chronological composition of the Devitsa hoard, the irregular ʿAbbāsīd dirhams as well as the imitation ʿAbbāsīd coins have been excluded. In addition, several other dirhams were omitted because their dates were partially or completely effaced.

The chronological breakdown of the Devitsa hoard is pretty much what one would expect theoretically. Older Sasanian-type drachms and Umayyad dirhams struck over three-quarters of a century or more earlier are few in number with the latter thinly but rather evenly distributed over the first-half of the eighth century. Dirhams issued during the first two decades of ʿAbbāsīd rule are few in number. Then, starting in the 770s, there are consistently larger components reflecting an increasing number of ʿAbbāsīd dirhams. As one might predict, the greatest number of coins was struck during the decade in which the most recent dirhams were issued. In short, one-third of the Devitsa hoard consisted of very recent dirhams and three-fifths were struck in the first thirty-eight years of the ninth century.

Irregular ʿAbbāsīd coins, imitations, and effaced dirhams as well as most Sasanian types have been omitted from the regional distribution below because the mints are either not available or questionable.

TABLE 2
Chronological Distribution of the Devitsa Hoard

	<i>Number</i>	<i>% of Total</i>
<i>6th century</i>	1	.5
<i>7th century</i>	5	2.3
<i>700-9</i>	3	1.4
<i>710-19</i>	2	.9
<i>720-29</i>	4	1.8
<i>730-39</i>	3	1.4
<i>740-49</i>	5	2.3
<i>750-59</i>	1	.5
<i>760-69</i>	6	2.7
<i>770-79</i>	23	10.4
<i>780-89</i>	18	8.1
<i>790-99</i>	16	7.2
<i>800-9</i>	22	10.0
<i>810-19</i>	21	9.5
<i>820-29</i>	16	7.2
<i>830-39</i>	75	33.9
Total	221	100.1

TABLE 3
Regional Distribution of the Devitsa Hoard

	<i>Number</i>	<i>% of Total</i>
<i>Transcaucasia</i>	5	2.3
<i>Iraq</i>	61	29.1
<i>Syria</i>	2	.9
<i>Kirmān</i>	2	.9
<i>Jibāl</i>	28	12.7
<i>North Africa</i>	23	10.5
<i>Transoxiana</i>	74	33.6
<i>Khurāsān</i>	19	8.6
<i>Sisṭān</i>	2	.9
<i>Ṭabaristān</i>	1	.5
Total	220	100.0

Iraqi dirhams, as one would expect, constitute a significant component of the hoard totaling almost three-tenths. What is most surprising is that Transoxianan dirhams constitute one-third of the hoard and form the single largest regional component. The exclusion of the 86 irregular 'Abbāsid coins with their dubious Iraqi mints results in the Central Asian dirhams being preponderant.

The prevalence of Transoxianan mints among the most recent dirhams is very notable. Among the 61 dirhams from the reign of al-Mu'taṣim (833–42), for example, 47 (77%) come from Transoxiana and another 7 (11%) come from Khurāsān, the most easterly of the Iranian provinces which also borders upon Transoxiana. Only 3 dirhams (5%) were struck in Iraq. The overwhelming dominance of Transoxianan dirhams among the most recent coins in the hoard would not be altered in any way by the inclusion of the irregular 'Abbāsid issues, as they were apparently earlier issues. Among other areas with significant components, Jibāl reflects the active mint at al-Muḥammadiyah while the great output of Ifrīqiyah and al-'Abbāsiyah in the 770s through the 790s accounts for North Africa.

For purposes of comparative analysis, I have focused upon those hoards from European Russia, the southeastern Baltic, Poland, Finland, Gotland, Transcaucasia, and the Near East, each of whose latest dirham dates to the second-quarter of the ninth century. These parameters allow us to compare the Devitsa hoard with roughly contemporaneous hoards found in most of the regions where dirham hoards were deposited at this time. However, in a certain sense, the Devitsa hoard cannot be truly compared with these other hoards. In the first place, thanks to Bykov's careful analysis, we have a large component of irregular 'Abbāsid dirhams from the Devitsa hoard which has not yet been reported from other contemporaneous hoards, many of which were identified earlier—before Bykov had brought these peculiar issues to our attention. Until the other contemporaneous hoards have been examined to determine if they contain such irregular 'Abbāsid dirhams, they shall not be truly comparable with the Devitsa hoard whose profile is so greatly influenced by the presence of these particular dirhams.

In addition, Devitsa is located along the northern borders of the Saltovo culture, the name given to the essentially nomadic and heteroge-

**Dirham Hoards Deposited ca. 825-50
in Eastern Europe**



neous Turkic peoples of the south Russian, north Caucasian steppe zone during the eighth and ninth centuries.¹³ The Khazars were the dominant group within the Saltovo culture at the time when the Devitsa hoard was deposited. No other dirham hoard of the second-quarter of the ninth century has been reported from the Saltovo lands. The other contemporaneous hoards from what we now call European Russia come from the more northerly regions inhabited during the ninth century by sedentary, non-Turkic peoples. Consequently, the Devitsa hoard is, at the present time, unique in its historical and geographical context.

Despite these limitations, it is possible to compare the Devitsa hoard with contemporaneous hoards from other areas whose latest coins are dated between 825 and 849. In Table 4, data are presented on the dynastic composition (in percentages) of fifteen hoards from six other regions.¹⁴ 'Abbāsid dirhams are uniformly the predominant element

¹³ See S. A. Pletneva, *Ot kochevii k gorodam: Saltovo-maiatskaia kul'tura*, Materialy i issledovaniia po arkheologii SSSR, no. 142 (Moscow, 1967), especially the map on p. 72 where no. 4 is Uryv.

¹⁴ The sources for this and the two succeeding tables are: Uglich, Dobrino, Lesogurt, Iagoshury, and Simony hoards—Thomas S. Noonan, "Ninth-Century Dirham Hoards from European Russia: A Preliminary Analysis," in *Viking-Age Coinage in the Northern Lands: The Sixth Oxford Symposium on Coinage and Monetary History*, ed. by M. A. S. Blackburn and D. M. Metcalf, BARIS 122 (Oxford, 1981), pp. 47–117, nos. 32, 38, 39, 40, and 41; Kohtla (Kochtel) hoard—T. Noonan, "Pre-970 Dirham Hoards from Estonia and Latvia, I: Catalog," *Journal of Baltic Studies* 8 (1977), no. 20, pp. 249–50 and "III: An Examination of the Ninth Century Hoards," *Journal of Baltic Studies* 9 (1978), p. 14; Svedjelandet—Beatrice Granberg, *Förteckning över kufiska myntfynd i Finland*, Studia Orientalia, 34 (Helsinki, 1966), pp. 13–30; Norrgårda 1 (Norrby's Land 2)—*Corpus Nummorum Suecia* 1.2, no. 10, pp. 87–890; Norrgårda 2 (Jakobsson's Land)—*Corpus Nummorum Suecia* 1.2, no. 8, pp. 80–83; Ramsowo—Marian Haisig, Ryszard Kiersnowski and Janusz Reyman, *Wczesnośredniowieczne skarby srebrne z Małopolski, Śląska, Warmii i Mazur: Materiały*, Polskie skarby wczesnośredniowieczne, Inwentarze Tom 4 (Wrocław-Warsaw-Kraków, 1966), no. 13, pp. 75–76; Leliani—E. A. Pakhomov, *Monetnye klady Azerbaidzhana i drugikh respublik i kraev Kavkaza*, Vypusk 2 (Baku, 1938), no. 395, pp. 24–25, I. L. Dzhakaganiia, *Topografiia kuficheskikh monet na territorii Gruzii* (Tbilisi, 1972), no. 36, pp. 16–19, I. L. Dzhakaganiia, *Inozemnaia moneta v denezhnom obrashchenii Gruzii V–XIII vv.* (Tbilisi, 1979), pp. 40–41; Dliivi (Diliori)—E. A. Pakhomov, *Monetnye klady Azerbaidzhana i drugikh respublik, kraev i oblastei Kavkaza*, Vypusk 6 (Baku, 1951), no. 1607, pp. 47–48, I. L. Dzhakaganiia, *Monetnye klady Gruzii*, 1 (Tbilisi, 1975), pp. 39–40, 147–54; Apenni—

TABLE 4: Percentage of Dirhams per Hoard with Latest Coin between 825-49 by Dynasty

Find-Spot	Latest Dated Coin	Total Number of Coins	Sasanian	Ispahbad	Umayyad Governors	Spanish Umayyad	Governors of Tudgha	'Abbasid Governors of Tabaristan	Umayyad	Idrisid	Agahlabid	'Abbasid	Imitations	Irregular 'Abbasid	'Abbasid Partisans	Tahiriid	Others
Southern Russia																	
1. Devilsa, 837/38, 323			2		**		*	*	5	1	*	64	1	27			
European Russia																	
2. Uglich, 829/30, 205			7		4	2		18	11	2		56			1		
3. Dobrino, 841/42, 527										5		95					
4. Lesogurt, 841/42, 132			2	1			1	1	16	1		78				2	
5. Iagoshury, 842/43, 1252			*	*				*	19			80				?	
6. Simony, 845/46, 88									9	1		90					
Southeastern Baltic																	
7. Kohila, 837/38, 481									3	*	*	94				2	
Sweden-Finland																	
8. Svedjelandet, 842/43, 107			13		8		1	4	4	2		66				2	
9. Norrgårda I, 833/34, 62				3	10				10	5		73					
10. Norrgårda II, 842/43, 53			4			4			21			68				4	
Poland																	
11. Ramsowo, 828/29, 335									1	*		99					
Transcaucasia																	
12. Leliani, 828/29, 167			1	1	1			2	7			88					
13. Dltivi, 833/34, 33			3					6	15		6	70					
14. Apeni, 833/34, 369			4	1	1	*		5	4	1		85					
15. Buradygia, 825-849, 211			5		2	*	1	2	11	1		78					
Near East																	
16. Sinaw, 840/41, 948			1	*	*	*			35	1		63	*				1

* * indicates less than 0.5%.

in every hoard of this period regardless of region. The percentage of 'Abbāsid dirhams in 13 of these 15 hoards is greater than that found in the Devitsa hoard. However, by combining regular and irregular 'Abbāsid dirhams, the 'Abbāsid element in the Devitsa hoard (91%) is almost identical with that in several other hoards. Umayyad dirhams are found in 14 of the 15 hoards. I am not certain whether the varying percentages of Umayyad coins (less than .5% to 35%) have any real significance, but the Devitsa hoard is on the low side here. Of the 15 other hoards, 10 have a greater percentage of Umayyad coins. Aside from the irregular 'Abbāsid coins, the other dynastic components of the Devitsa hoard are compatible with the figures from other contemporaneous hoards. In short, aside from the irregular 'Abbāsid dirhams, the dynastic distribution of the Devitsa hoard fits the general pattern found in other contemporaneous hoards.

Table 5 contains data on the chronological composition of eleven contemporaneous hoards from five different regions. It is immediately apparent that the Devitsa hoard differs from almost all others due to its high percentage of recent dirhams. The only hoard which is in any way comparable is Iagoshury where 24% of the coins are dated between 816/17 and 843/44. Unfortunately, a more refined analysis of the Iagoshury hoard has not been published. To a certain extent, the large percentage of very new dirhams in the Devitsa hoard would be reduced if the 86 somewhat older irregular 'Abbāsid coins were included. In this case, the figures for the Devitsa hoard would be: 820s = 5%; 830s = 24%. Even though these "adjusted" figures are smaller, the Devitsa hoard would still be exceptional with 29% of its coins struck in the 820s and 830s. Almost every other contemporaneous hoard displays a distinct aging pattern, i.e. a large number of older coins and relatively few new issues. Dobrino in European Russia, Kohtla in Estonia, Svedjelandet on Åland, Ransowo in Poland, and Apeni in Georgia all reflect

E. A. Pakhomov, *Monetnye klady Azerbaidzhana*, 2, no. 396, p. 25, I. L. Dzhallagania, *Inozemnaia moneta*, p. 49; Buradygia (Buriadigia)—E. A. Pakhomov, *Monetnye klady Azerbaidzhana*, 2, no. 392, pp. 23–24, Kh. A. Mushegian, *Denezhnoe obrashchenie Dvina po numizmalicheskim dannym* (Erevan, 1962), p. 44; Sinaw—Nicholas Lowick, "The Sinaw Hoard of Early Islamic Coins," *Journal of Oman Studies* (forthcoming).

TABLE 5
Percentage of Dirhams per Hoard
with Latest Coin between 825-49 by Date^a

<i>Find-Spot</i>	<i>Latest Dated Coin</i>	<i>Total Number of Coins</i>	<i>Pre-750</i>	<i>750-769</i>	<i>770-789</i>	<i>790-799</i>	<i>800-809</i>	<i>810-819</i>	<i>820-829</i>	<i>830-839</i>	<i>840-849</i>
Southern Russia											
1. Devilsa, 837/38, 221			11	3	19	7	10	10	7	34	
European Russia											
2. Uglich, 829/30, 205			24	4	29	10	16	11	6		
3. Dobrino, 841/42, 514			5	13	25	11	26	14	5	2	+
4. Iagoshury, 842/43, 1252			17	[-28-][-----32-----][-----24-----]							
Southeastern Baltic											
5. Kothla, 837/38, 463			3	[---54---			25	13	3	1	
Sweden-Finland											
6. Svedjelandet, 842/43, 106			25	8	34	6	9	11	4	1	1
7. Norrgarda I, 833/34, 45			29	11	13	16	16	11	2	2	
8. Norrgårda II, 842/43, 41			32	5	32		15	7	7		2
Poland											
9. Ramsowo, 828/29, 328			1	16	35	17	18	10	3		
Transcaucasia											
10. Leliani, 828/29, 165			10	15	27	16	16	12	5		
11. Dlivl, 833/34, 15			33	7	27		13	7		13	
12. Apeni, 833/34, 368			9	10	37	15	16	8	4	1	

^a The chronological distribution of the Sinaw hoard, as prepared by Nicholas Lowick, is included as an addendum to this article.

one major trend in this respect. The large number of very recent dirhams in the Devitsa hoard clearly distinguishes it from its contemporaries and requires further study.

Table 6, which contains data on the regional distribution of dirham hoards from the second-quarter of the ninth century, brings to light another unique or distinct feature of the Devitsa hoard. Iraqi dirhams compose the largest single component in all the thirteen other hoards from this period and exceed 40% in nine cases. Other large components (10% or more), when they occur, are most likely to be from North Africa or Jibāl. By way of contrast, the largest regional component in the

TABLE 6
 Percentage of Dirhams per Hoard with Latest Coin between 825-49 by Region

Find Spot	Latest Dated Coin	Total Number of Coins	IRAQ	NORTH AFRICA	JIBAL	TRANSCAUCASUS	TABARISTAN	KHURASAN	TRANSOXIANA	FAIRS	SYRIA	KIRMAN	SPAIN	SISTAN	ARABIA	KHUZISTAN	JURJAN
Southern Russia																	
1. <i>Devilsa</i> , 837/38, 220			29	11	13	2	1	9	34		1	1		1			
European Russia																	
2. <i>Uglich</i> , 829/30, 180			23	9	14	14	22	6	3	2	2		2	2	1		
3. <i>Dobrinno</i> , 841/42, 526			60	+	18	4		7	8	+		+		2			
4. <i>Iagoshury</i> , 842/43, 1048			55		20			9	16								
Southeastern Baltic																	
5. <i>Kohlla</i> , 837/38, 473			56	3	22	2		5	9	1	+	+		3		+	
Sweden-Finland																	
6. <i>Svedjelandel</i> , 842/43, 94			40	14	15	5	4	5	3	9		2		2			
7. <i>Norrgräda I</i> , 833/34, 36			31	31	11		6	8	11							3	
8. <i>Norrgräda II</i> , 842/43, 35			46	11	14	3		6	6	6	3		6				
Poland																	
9. <i>Ramsowo</i> , 828/29, 326			66	3	18	2		2	8			1		+			
Transcaucasia																	
10. <i>Letiani</i> , 828/29, 158			48	15	21	4	3	1	3		1			3		1	
11. <i>Ditvi</i> , 833/34, 19			37	21	5	11	11			11				5			
12. <i>Apeni</i> , 833/34, 359			38	22	17	7	6	3	3		1	1	+	3			
13. <i>Buradygia</i> , 825-49, 171			41	9	20	4		6	11	1	2	1	1	4		1	
Near East																	
14. <i>Sinaw</i> , 840/41, 833			51	7	12	1	+	7	8	3	5	1	+	3	+	1	+

Devitsa hoard is Transoxiana. In fact, the Devitsa hoard contains by far the largest percentage of Transoxianan dirhams in any dirham hoard from this period. Transoxianan dirhams are present in 12 of the 13 other hoards but their greatest percentage in these hoards is 16%. If we include the irregular 'Abbāsīd dirhams, the percentage of Transoxianan dirhams in the Devitsa hoard drops from 34% to 27%. In other words, even when the irregular 'Abbāsīd issues are included, the Devitsa hoard contains an extraordinarily high percentage of Central Asian dirhams. The large number of Transoxianan coins in the Devitsa hoard distinguishes it from other contemporaneous hoards and deserves additional examination.

In brief, the Devitsa hoard differs from other contemporaneous hoards in having the largest percentage of new dirhams and the largest percentage of dirhams struck in Transoxiana, although other possible points of interest can be found in the comparative tables. There are, unfortunately, only very limited data on several other Swedish hoards which may belong to this period: Väsby in Upland and Norrkvie, Oxarve, Hummelbos, and Hejde prästgård on Gotland.¹⁵ Also, a large hoard of around 400 whole and 1,800 dirham fragments has been found recently on the island of Rügen off the southern Baltic coast in what is now the DDR. This hoard, which is reportedly being prepared for publication, has as its latest dirham one from ca. 842.¹⁶ The fragmentary data available on the five Swedish hoards does not appear to contradict the conclusions reached here while full publication of the Rügen hoard should provide additional evidence on hoards from Poland and northern Germany. In any event, there is no doubt that the Devitsa hoard merits further study for reasons that go beyond the attention it has already received because of its so-called Khazar dirhams. Hopefully, our Soviet colleagues will complete and publish the comprehensive analysis which Bykov began many years ago.

¹⁵ See Mårten Stenberger, *Die Schatzfunde Gotlands der Wikingerzeit, 2: Fundbeschreibung und Tafeln* (Lund, 1947), p. 76, no. 197; p. 118, no. 291; p. 33, no. 67; p. 104, no. 265; Ulla S. Linder (Welin), "En Uppländsk Silverskatt från 800 = tallet," *Nordisk Numismatisk Årsskrift* 1938, p. 124; *Corpus Nummorum Suecia*, 1.2, no. 30, pp. 206–8.

¹⁶ *Coin Hoards* 1 (1975), p. 73, no. 273.

ADDENDUM

After this article was submitted for publication, Nicholas Lowick kindly sent me the full typescript of his forthcoming article on the Sinaw hoard. Unfortunately, it arrived too late to include the data on the chronological distribution in Table 5. For those interested in this question, Mr. Lowick's figures show the following breakdown of the Sinaw hoard:

<i>Years</i>	<i>Number</i>	<i>%</i>
Pre-698	8	.9
698/9-699/700	5	.6
700/1-708/9	33	3.9
709/10-718/9	117	13.8
719/20-728/9	35	4.1
729/30-737/8	39	4.6
738/9-747/8	67	7.9
748/9-757/8	18	2.1
758/9-767/8	43	5.1
768/9-776/7	91	10.7
777/8-786/7	71	8.4
787/8-796/7	28	3.3
797/8-805/6	98	11.5
806/7-815/6	89	10.5
816/7-825/6	56	6.6
826/7-835/6	43	5.1
835/6-844/5	9	1.1
	—	—
	850	100.2

In general, the Sinaw hoard shares the aging pattern characteristic of the hoards of this period; only 12.8% of its dated coins were issued in the most recent quarter century (816/7-840/1).

THE COINS OF THE LATER ILKHĀNIDS: MINT ORGANIZATION, REGIONALIZATION, AND URBANISM

(PLATE 29)

SHEILA S. BLAIR

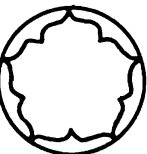

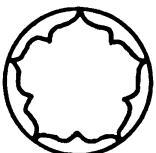
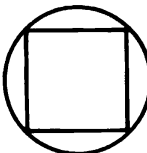
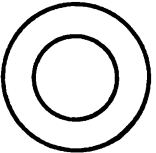
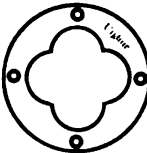
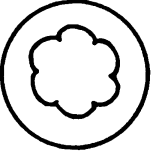
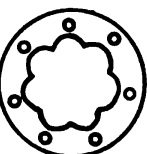
In another article analyzing the question of the successive types of late Ilkhānid issues, I showed that changes in type correspond either to devaluations caused by the need to stretch the supply of bullion or to political factors, such as the need to underscore authority or to propagandize.¹ Detailed examination of these coins with regard to paleography, ornament, layout, and style has also led to some suggestions about the imperial organization and distribution of the coinage, the question of regional styles, and information about specific urban sites as centers of artistic patronage.

Decisions about the coinage were made on three levels: imperial, provincial, and local. The design of each major new type (one for Ghāzān, three for Uljaytū, and six for Abū Saʿīd, see the Schematic Representation of types, below) was an imperial choice: each new type was issued simultaneously throughout the empire. In the case of types struck to a new, reduced weight standard (Uljaytū C and Abū Saʿīd B, E, and F) all the issues appeared in the same year and

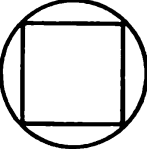
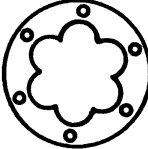
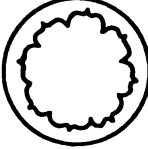
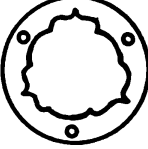
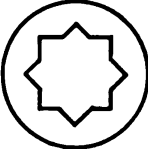
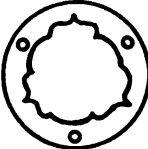

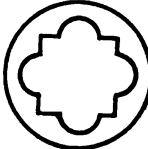
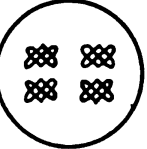
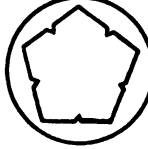
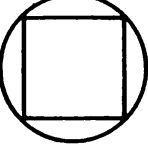
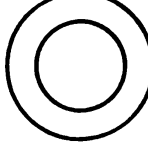

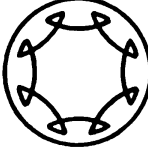
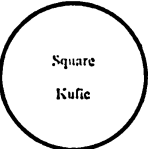
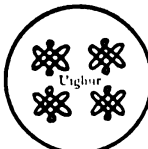
¹ "The Coins of the Later Ilkhānids: A Typological Analysis," *JESHO* (forthcoming). The basic research for this article was also done at the ANS's 1979 Graduate Seminar in Numismatics; I would like to thank again the ANS staff, particularly Michael Bates, for their support. I have arbitrarily designated the side of coins with the Profession of Faith as the obverse.

supplanted the previous types. In the case of the types issued for political reasons, there was some overlap, with old types still being struck at the same time as new ones. For example, in the case of Uljaytū B, a new type was introduced due to Uljaytū's religious conversion. Some mints began striking the new types in 709, while others did not begin until 710.²

FIGURE 1
Schematic Representation of Types

Type	Date	Obverse	Reverse	Frequency Table Peak	Weight Standard	Number of Qirāts
Ghāzān	696–704			4.28	4.32	24
Uljaytū A	704–9					
Uljaytū B	709–13					
Uljaytū C	713–16			3.92	3.98	22

² Mints striking Uljaytū Type B coins in 709 include coins from Arz al-Rūm, Tabrīz, Bāzār, Sāva and Sulṭāniyya in the ANS collection; thirteen examples were reported in M. Fearey, K. Luther, and J. M. Smith, Jr., "Two Ilkhanid Hoards?" *Proceedings of the Eighth International Congress of Numismatics*, September 1973 (Paris, 1976), p. 518.

<i>Type</i>	<i>Date</i>	<i>Obverse</i>	<i>Reverse</i>	<i>Frequency Table Peak</i>	<i>Weight Standard</i>	<i>Number of Qirāts</i>
Abū Sa'īd A1	717-18			3.87		
Abū Sa'īd A2	717-18					
Abū Sa'īd A3	717-19					
Abū Sa'īd B	719-23			3.52	3.60	20
Abū Sa'īd C	722-24					
Abū Sa'īd D	723-29					
Abū Sa'īd E	729-34			3.17	3.24	18
Abū Sa'īd F	734-36			2.82	2.88	16

Similarly, there was some overlap in Abū Saʿīd Types B, C, and D: Tabrīz occasionally struck Type B, the mihrab type, until 724, although Type C was introduced in 722 and Type D in 723. Economically, this arrangement makes perfect sense: in the case of the new devalued types, the mints were allowed to strike more coins from the same amount of silver and hence would have willingly abandoned the old dies; whereas in the case of the new types struck at the same weight, there was no incentive to give up the old dies, and new and old types were struck concurrently until the old dies broke.

Not only the designs for the new types, but also the dies themselves seem to have been distributed from a central source. The clearest evidence for this central distribution can be seen in the introduction of Abū Saʿīd Type C in 722: Arzinjān, Shīrāz, Tiflīs, Shabānkāra, Maʿdin Gumushbāzār, and Nishāpūr all issued a variant type sharing the following characteristics: 1) the *yā* of *ayyām* moved to the second line; 2) the same style paleography for the word *bahādur*, and 3) the same ornament over *khallada*, *mulkahu* and *Saʿīd*. These shared characteristics suggest a common hand, but given the vast geographical spread of these issues—almost the entire range of the Ilkhānid empire from Khurāsān in the east to Anatolia in the west and from Georgia in the north to Fārs in the south—it is impossible to explain this unity in terms of the movement of a die cutter. The only other explanation is the distribution of dies from a central source.

The most logical source for these dies is Tabrīz. Smith has shown that Tabrīz issued the highest quality coins, both during Uljaytū's reign and, to slightly lesser extent, during Abū Saʿīd's.³ Tabrīz was also the most prolific mint. Not only do more Tabrīz coins survive in museum collections today, but even in a hoard of eastern Iranian provenance, there are a large number of Tabrīz coins struck from many different dies.⁴ Furthermore, Tabrīz was the only mint to consistently issue different denominations.

³ See the analysis of an Uljaytū hoard, Fearey et al. (above, n. 2), p. 518 and Table 3; comparable data from the reign of Abū Saʿīd, 729–32/1328–32, is given on p. 521 and in Table 5.

⁴ Fearey et al. (above, n. 2), p. 515.

Stylistic considerations also support this identification of Tabrīz as trend setter. For example, in Abū Saʿīd Type B coins, Tabrīz (and in one case Marāgha) varied the location of the mint name: several issues of 721 have *ḍarb Tabrīz* inserted as one line either in the middle or at the bottom of the reverse field. As this insertion caused the dislocation of the legend, this arrangement was dropped in favor of placing *ḍarb Tabrīz* on two lines. The new two-line pattern continued into 722 when it became the standard for the obverse of the following type.

Two unique coins in the ANS collection prove this theory of distribution of dies from Tabrīz. On one coin (Plate 29, 1) the center of the reverse is clearly marked *Tabrīz*, but the margin on the same face reads "striking of Tiflis in 719." On the second coin (Plate 29, 2) the mint name and date on the reverse (Varāmīn, 711) are engraved in mirror reverse. These two aberrant coins suggest that incomplete dies were distributed from Tabrīz with space for specific information, such as mint and date, which the inexperienced local die cutter filled in incorrectly.

Following the initial distribution of dies for each type from Tabrīz, the coinage was controlled provincially. There are five different kinds of evidence to support this assumption of regional control. First, there are regional subgroups of Abū Saʿīd Type A: subgroup A1, with a square obverse, was issued in Anatolia only, while another subgroup, A2, with an octagonal obverse and slightly different legend, was struck in Jibāl and Azarbayjān. Even within the limited number of published illustrations, provincial variations exist within subgroup A3. The ANS examples from Jibāl province⁵ are close in style and were probably done by the same hand: they share the same ornament (a rosette over *al-muʿazzim* and at the bottom) and paleography (the lack of a tail of the *kāf* of *mulkahu*, for example.) On the other hand, those from the northwest⁶ form a distinct set: the word *abū* was moved to line four and *mulkahu* transferred to the bottom line where it replaced the ornament.

The second argument for provincial control of mints is the fact that several issues have regional variations of the legend. In Abū Saʿīd

⁵ Sāva, Kāshān and Iṣfahān.

⁶ Tabrīz, Nakhchivān, and a crude Tiflis example.

Type E, all the Anatolian issues⁷ have a variant legend: *al-sulṭān al-aʿzam* (the greatest sultan) has been changed to *al-sulṭān ibn al-sulṭān* (the sultan, son of the sultan). With the exception of the Arz al-Rūm (Erzerum) issues, all the others share a common ornament over the *Allāh*. In Abū Saʿīd Type F, Anatolia also displays a regional variation: Sīvās, Suyurhiṣār, Qirshahr, Qaysariya and Gumushbāzār all have the word *sana* written in the upper right. For the same type Iraq also shows a provincial unity, with coins from Baghdād, Wāsiṭ and Baṣra dated both in Ilkhānī and Hijrī years. In Abū Saʿīd Type D, many variations occur in the arrangement of the names of the four Orthodox Caliphs, but only the examples from Sulṭāniyya and Bāzār (the camp mint) add the Qurʾānic phrase (3:25) used earlier on Abāqāʾs and Hülāgūʾs coins.

Third, there are regional variations in style. Examples dated 729 from Sīvās, Qaysariya and an unidentified mint share a common obverse trait with plain circles surrounding the octagon. The Khurāsān issues⁸ of Uljaytū Type C all have an ornament in the margin not found on other coins.

There is also a provincial preference for different denominations. Smith has shown that gold was not struck to any standard, but rather was only issued sporadically for special commemorative or economic reasons.⁹ At times, gold coins were even struck from the same dies as silver ones (Plate 29, 3–4). The standard silver coin was a double dirham, but large six-dirham pieces (known as silver dinārs) and smaller one-dirham and half-dirham pieces were also struck. These denominations were not distinguished by type, only by weight. In some cases the variant denominations were struck from the standard double-dirham dies (Plate 29, 5): the six-dirham coins were simply thicker (Plate 29, 6) while the margin on the smaller denomination coins was often off flan. Although the various denominations were issued throughout the empire, Khurāsān showed a marked preference for the heavier

⁷ Arz al-Rūm, Arzinjān, Ankūriyya, Tūqāt, Sīvās, Qaysariyya, and Maʿdin.

⁸ Jājarm, Sabsavār, Jurjān and Nishāpūr.

⁹ John M. Smith and F. Plunkett, "Gold Money in Mongol Iran," *JESHO* 11 (1968), pp. 275–97.

six-dirham coins; in contrast, Rūm preferred the smaller one dirhams and half dirhams.

The fifth type of evidence for provincial control is the sharing of dies between cities within the same province. In his Uljaytū hoard, Smith found a coin with a Kāshān obverse and a Sāvā reverse.¹⁰ Album owns a coin with a Sāmsūn obverse and Ma'din Gumushbāzār on the reverse.¹¹ In view of his hoard evidence, Smith argued that certain local mints went out of operation for a year or two and their dies were moved to another nearby mint: Iṣfarāyīn and Kāshān, he suggested, went out of production in 713–16 and 712–13 respectively.¹² Publication of more hoards will undoubtedly turn up more examples of this shift of mints within provincial boundaries.

In sum, there are five kinds of evidence for provincial control of minting: regional subgroups, variations in legend, common stylistic characteristics, preference for different denominations, and shared dies. What provinces can be defined more distinctly?

Stephen Album has traced the breakup of the Ilkhānid empire into four distinct monetary regions during the latter half of the fourteenth century (ca. 755–96/1354–94).¹³ He cites the account of Ibn Faḍlallāh al-'Umarī who described three distinct currencies in Iran ca. 739–40: those of Khurāsān, Baghdād, and Tabrīz. These divisions are already apparent in the imperial issues of the later Ilkhāns. We have already seen that the east was a distinctive area, with its preference for heavier coins, common stylistic characteristics in Uljaytū Type C, and dies shared between Iṣfarāyīn and Astarābād. I would term this area Greater Khurāsān, while noting that it included the provinces of Jurjān and Qūmis.

¹⁰ Fearey et al. (above, n. 2), p. 518 and pl. 57, 2.

¹¹ Stephen Album, unpublished Ashmolean notes, unpaginated.

¹² Fearey et al. (above, n. 2), p. 518.

¹³ Stephen Album, unpublished discussion of fourteenth century Iranian monetary system, citing the account of Ibn Faḍlullāh al-'Umarī al-Dimashqī preserved in Abū'l 'Abbās Aḥmad b. 'Alī al-Qalqashandī, *Ṣubḥ al-A'shā fi Sana'a al-Inshā* (Cairo, n.d.), vol. 4, pp. 422–23. The same account is given in al-'Umarī's *Masālik al-absār fi mamālik al-amsār*, ed. and trans. Klaus Lech, *Das Mongolische Weltreich* (Wiesbaden, 1968), text p. 88, lines 5–9; trans. p. 150.

Similarly, 'Iraq was a unified area, consistently omitting words from Uljaytū Type B and dating Abū Sa'īd Type F in both Hijrī and Ilkhānī years. This area would correspond to al-'Umarī's Baghdād. The identification of Baghdād as one of the main centers of economic prosperity during the later Ilkhānid period is of particular interest to art historians. Some of the problematic paintings of the period are a set of so-called "small" *Shāhnāma* manuscripts. Their provenance and date have long been a subject of debate, with hypotheses ranging from Mongol Iran to fifteenth century India. The latest research has attributed them to Baghdād ca. 1300, partly in view of the large number of illuminated *Qur'āns* produced there.¹⁴ Numismatic evidence certainly supports the idea of Baghdād as a center of economic activity and hence a probable point for artistic patronage.

Writing about 740, al-'Umarī classified the rest of Iran under the heading Tabrīz, and as we have seen, in the first part of the fourteenth century, Tabrīz was certainly the central mint. For this period, however, we can also distinguish further subdivisions within the Ilkhānid empire.

Jibāl was a distinct entity, with Iṣfahān as its capital. The Abū Sa'īd Type A3 coins are stylistically similar and, in the ANS example, Iṣfahān is called the *dār al-mulk*. Uljaytū Type C dies were shared between Kāshān and Sāva. Apparently with the division of the Ilkhānid empire, by 740 this area of central Iran had ceased to be considered an independent economic area, despite the emergence of the Muẓaffarid dynasty.¹⁵

Indeed, in the latter half of the fourteenth century, this area had been incorporated into that of Shīrāz, the fourth major economic zone.¹⁶ Al-'Umarī, however, did not mention the Shīrāz area, and Album speculated as to whether Shīrāz had not become separated as early as 740 or whether al-'Umarī was simply unaware of the event. Certainly, up to 736/1335 there is no evidence of any Shīrāz/Fārs economic

¹⁴ Marianna S. Simpson, *The Illustration of an Epic: The Earliest Shah-nama Manuscripts* (New York, 1979).

¹⁵ For the coinage of the Muẓaffarids, see Stephen Album, "Power and Legitimacy: the Coinage of Mubārīz al-Dīn Muḥammad ibn al-Muẓaffar at Yazd and Kirman," *Le Monde Iranien et l'Islam* 2 (1974), pp. 157–71 (hereafter "Muẓaffar").

¹⁶ Album (above, n. 13), unpaginated.

grouping based on a study of the style, weight, or dies of the coins. Once, again, this is relevant to artistic patronage, for there is another well-known group of manuscripts attributed to the Injū dynasty in Shīrāz, 1330–52.¹⁷ It would seem, then, that Shīrāz became an increasingly important economic area in the 1330s, hence a center of prosperity and patronage, but only became economically separate with the independent issues of Abū Ishāq in 745.¹⁸

Of all the areas issuing coins under the late Ilkhāns, the most chaotic was the west—the province of Rūm. This is not surprising, as this was the era of the emergence of various small principalities or *beyliks* only loosely under the rule of the Ilkhānid sultan. Rūm was the “Wild West” of the empire, and Album has shown that many of the so-called barbarous copies of Abū Saʿid’s coinage, often regarded as counterfeit, are retrograde Anatolian issues.¹⁹ He has identified imperial Ilkhānid mints in fifteen cities in central Anatolia,²⁰ and four more in the east, often considered a separate province with a capital at Arzinjīn.²¹ In addition to the regular Abū Saʿid types, Anatolia issued at least three local variants with Abū Saʿid’s titles, but with variously shaped cartouches.

The first (local variant a, Plate 29, 7) has a diamond on the obverse and a triangle on the reverse.²² It was issued in three cities between 723 and 728—Qayṣariyya, Arz al-Rūm and Pūl-i Aras. Qayṣariyya and Arz al-Rūm were entrepôts on the main east-west trade route. Pūl-i Aras, literally the bridge over the Aras/Araxes River, was a town near

¹⁷ Basil Gray, *Persian Painting* (Geneva, 1961), “Shiraz and the Iranian Tradition in the Fourteenth Century,” pp. 57–63.

¹⁸ On these independent issues of Shaykh Abū Ishāq Injū, see Album, “Muḏaffar,” pp. 159 and 162.

¹⁹ Stephen Album, “Coins of Abu Saʿid,” *Numismatics International Bulletin*, vol. 10, pt. 2 (1976), pp. 60–61.

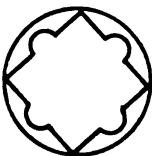

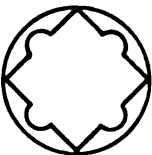
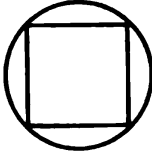
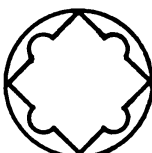
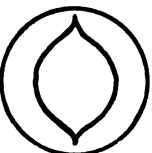
²⁰ Sīvās, Ankūriyya, Qastamūnī, Sāmsūn, Tūqāt, Nīksār, Amaysā, Maʿdin, Maʿdin Gumushbāzār, Aqsaray, Luʿluʾa, Qūnya, Qayṣariyya, Dīvrīgī, and Qirshahr.

²¹ Arzinjān, Bāybirt, Arz al-rūm and Avnīk.

²² BMCOR 6, Triangle Type, 253; Artuk, Type 7, 2259; M. Mubarak, *Mūz-i Hümayun meskulāt-i kadime-i islamiye Katalogu*, vol. 3 (Constantinople, 1318/1900–1901); Type 5, 192.

FIGURE 2

Schematic Representation of Abū Sa'id Local Variants

<i>Local Variant</i>	<i>Date</i>	<i>Location</i>	
a	723–28		 Qayşariyya, Arz al-Rūm, Pūl-i Aras
b	723–28		 Qaşāmūnī, Burlu
c	729		 Sīvās, Tūqāt, Qayşariyya

Nakhchivān on the trade route north from Azarbāyjān to Arrān.²³ In view of the location of these cities and the fact that standard types of Abū Sa'id coinage were concurrently issued there, one can speculate that this local variant served some local trade function.

In contrast, politics motivated the other two local variants. Local variant b, issued in Qaşāmūnī and Burlu (modern Safranbolu) from 723 to 728, has a diamond on the obverse and a square on the reverse.²⁴ Qaşāmūnī was the seat of the Isfandiyārids or Jāndārids, a local dynasty which first appeared in Anatolia in the 1290s.²⁵ Sulaymān Pashā, their first important ruler, took over Qaşāmūnī in 1309,

²³ G. Le Strange, *The Lands of the Eastern Caliphate* (Cambridge, 1905), p. 167. According to 'Alī Yazdī, the bridge was built by Diyā al-Mulk, son of the famous Saljūq vizir, Nizām al-Mulk.

²⁴ Artuk, Type 9, 2266.

²⁵ Claude Cahen, *Pre-Ottoman Turkey* (New York, 1968), pp. 310–12.

followed by Burlū and Sinūb. This local variant of Abū Saʿīd coinage with its distinctive cartouche is a mark of the growing independence of the Isfandiyārid *beylik*. After the dissolution of the Ilkhānid empire in 1335, Sulāyman Pashā went one step further and began striking coins with his own name and similar cartouches.²⁶

Local variant c has a similar explanation. This coin, with a lozenge on the reverse and varying cartouches on the obverse, was issued in Sīvās, Tūqāt, and possibly Qayṣariyya for a short while in 729 (Plate 29, 9–10).²⁷ Shortly thereafter, all three cities returned to striking the standard type of Abū Saʿīd coinage (Plate 29, 11). Following Tīmūrtāsh's execution in 728 and the downfall of the Chūpānids, the governorship of Rūm was entrusted to one of Tīmūrtāsh's lieutenants, Eretna Uigher, founder of the Eretnid dynasty.²⁸ Like the Isfandiyārid *beylik*, in the 740s the Eretnids also began minting coins in their own names.²⁹ This local variant of Abū Saʿīd coinage probably marks Eretna's tentative attempt at independence, a move which was promptly curtailed by the central Ilkhānid authority, but which would again surface after the collapse of the empire. Thus, these two local variants mark the growing independence of the Anatolian principalities and foreshadow the later division into *beyliks*.

Beyond the provincial organization of coinage in the late Ilkhānid empire, there is also evidence for a certain amount of local freedom. For example, in Abū Saʿīd Type B beginning in 720, Arzinjān, Qayṣariyya, Bāybirt, and Baghdād all inserted the mint name in place

²⁶ Philip Remler, "Ottoman, Isfendiyarid and Eretnid Coinage: A Currency Community in Fourteenth Century Anatolia," *ANSMN* 25 (1980), pp. 167–88. He points out that as Sulāymān Pashā's coinage is undated, it could have been struck before Abū Saʿīd's death in 1335, perhaps as early as 1327, the end of effective Mongol rule over Western Anatolia. Interestingly enough, the earliest Ottoman issue, a coin of Urhān Ghāzī from 727, Bursa, contains the same cartouche shapes, but on the opposite faces; i.e. the square contains the profession of faith on the obverse, while the looped diamond with the titles, date, and mint is on the reverse (see Ibrahim Artuk, "Early Ottoman Coins of Orhan Ghazi," in D. Kouymjian, ed., *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honor of George C. Miles* (Beirut, 1974), pp. 457–63, (hereafter, *Studies Miles*), coin 1.

²⁷ Artuk, Type 5, 2249. The date 727 should probably be read as 729.

²⁸ Cahen (above, n. 25), pp. 362–63.

²⁹ Remler (above, n. 26), pp. 172–75.

of the word *al-naṣr* on the reverse. In view of the geographical spread of these cities, from 'Iraq to Aẓarbayjān, and the fact that not all cities in the province followed this variation, this trait seems a matter of civic independence rather than of regional style.

Mint independence varied with the degree of political disunity. For example, in Abū Sa'id Type A, issued during a period of internal dissension before the clear assertion of power by Abū Sa'id and his general Chūpān, myriad local variations exist. The 719 examples from Arzinjān insert the word *ayyām* (days) in the reverse legend. The obverse octagon from Nīshāpūr has much flatter sides and its marginal legend does not read continuously around, but repeats the mint name on both sides. The ANS examples from Barda', Marāgha, Kīrmān, and Yazd, all dated 717, have the name of the mint at the base of the hexafoil on the reverse, while those from Tiflīs (717), Mawṣil (718) and Nīshāpūr (717) have an ornament there. Even within the same mint there is a lack of consistency: a 71x coin from Tabrīz has the mint at the base of the profession of faith in the obverse octafoil, whereas a 718 coin has the mint name both there and on the reverse as well.

Variation is also related to geographical distance. Tiflīs, one of the northern outposts of the empire, consistently issued idiosyncratic coins. Its Abū Sa'id Type E, for example, has a dot in place of the mint name which is shifted to the margin; the obverse octagon is surrounded by dotted circles. Its Abū Sa'id Type F has a variant layout, no Uighur, and no date.

Study of these coins also provides information about specific cities in the later Ilkhānid empire, particularly in reference to the question of economic prosperity and artistic patronage. I have already discussed the overwhelming importance of Tabrīz as a mint. This is no surprise, for contemporary sources also regarded it as the capital. Ḥamdullāh Mustawfī called it "*qubbat al-Islām* . . . the largest and finest city in all the land of Iran."³⁰ Ibn Baṭṭūṭa marvelled at the luxurious merchandise in its bazaars.³¹ Al-'Umārī called it "the seat of the kingdom,

³⁰ *Nuzhat al-Qulūb*, ed. and trans. G. Le Strange (London, 1915 and 1919), text pp. 75–79, trans. pp. 78–83.

³¹ H. A. R. Gibb, trans., *The Travels of Ibn Baṭṭūṭa* (Cambridge, 1962), vol. 2, pp. 344–45.

then [followed by] Sultāniyya.”³² On the other hand, Marāgha, capital under Hūlāgū, had become a minor mint³³ while Uljaytū’s attempt to establish a new capital Sultāniyya was quickly an economic failure. The earliest coins, with the legend *Sultāniyya al-ma’mūriya* (Sultāniyya the flourishing), date from 706;³⁴ this confirms, but does not elucidate, the varying textual dates of 704–6/1305–6 given for the beginning of the work.³⁵ The sources agree the city was completed in 713.³⁶ This event was marked both by celebrations and by the issue of several commemorative coins. Not only is there a unique type of Uljaytū coin from Sultāniyya dated 713 with a circular obverse and a hexafoil on the reverse,³⁷ but there were also several special copper issues.³⁸ Sultāniyya continued to mint under Abū Sa’id: sporadic examples of all his major types exist,³⁹ but compared to surviving examples from Tabriz, they are far fewer in quantity and more limited in denomination and date. Tabriz obviously never gave up its economic pre-eminence.

³² Lech (above, n. 13), text p. 85, line 17; trans. p. 148.

³³ Abū Sa’id Types A3, B, C, E, and F were only sporadically issued there (717, 719–22, 729, 33–34 Ilkhānī) and not in as large quantity as those from Tabriz.

³⁴ I discount the report of the coin of Ghāzān in *BMCOR* 6, 117, as highly improbable. There is a gold coin in the Bibliothèque Nationale (Stephen Album, unpublished notes) as well as a silver one in Istanbul (Mūbarak [above, n. 22], Type 1, 90).

³⁵ Donald Little, “The Founding of Sultāniyya: A Mamluk Version,” *Iran* 16 (1978), pp. 170–73, summarizes the evidence.

³⁶ Little (above, n. 35), p. 171 and n. 164. The underlayer of decoration in Uljaytū’s tomb there is also dated 713; Sheila Blair, “The Inscriptions of the Tomb of Uljaytū at Sultāniyya,” *Islamic Art* 1 (1983, forthcoming).

³⁷ Fearey et al. (above, n. 2), pl. 52, 2.

³⁸ Philippe de Saxe-Cobourg, “Une Medaille Commemorative de la Fondation et de l’Achevement de la Ville de Sultaniyye (1305–1313),” *Congres International Numismatique* (Brussels, 1891), pp. 277–90. The Leningrad coin should be read: *Fulūs-i shahr-i mubārak-i sullāniyya* (copper coin of the blessed city of Sultāniyya). Stephen Album has published another example, “A Persian Cashpiece,” *Cash on the Line* 52 (1968).

³⁹ Of years 717, 719–22, 725, 729–31 and 33 Ilkhānī.

On the other hand, several new mints appear under Abū Saʿīd.⁴⁰ His type F coins were issued in Abū Saʿīdiyya/Bū Saʿīdiyya.⁴¹ This site is unmentioned in the sources. It could be a fiat city such as Ul-jaytū's Sultāniyya or a complex comparable to Ghāzān's section of Tabrīz known as Shām or Ghāzāniyya⁴² or Rashīd al-Dīn's quarter known as the Rabʿ-i Rashīdī.⁴³

We know that coins were issued in the Rabʿ-i Rashīdī. Rashīd al-Dīn himself reported that there was a mint there,⁴⁴ but I know of no examples of coins issued during his lifetime. Following his execution in 718/1318, the quarter was plundered, but under his son Ghiyāth al-Dīn, chief vizir from 728–36/1328–36, the area was restored.⁴⁵ Examples of Abū Saʿīd Types E and F coins minted in the Shahrīstān-i Rashīdī from the years 731 and 33–34 Ilkhānī/734–35 confirm the quarter's economic revival.⁴⁶

Once again, these coins are related to artistic patronage. Recent scholarship has attributed the major illustrated manuscript of the period, a magnificent large-scale *Shāhnāma*, to Ghiyāth al-Dīn's sponsorship

⁴⁰ Other new Fārs mints are published by Nicholas Lowick, "Trade Patterns on the Persian Gulf in Light of Recent Coin Evidence," *Studies Miles* (above, n. 26), pp. 319–34. Here I am considering only those mints which have some bearing on artistic patronage.

⁴¹ Examples from 33 Ilkhānī: ANS; Stephen Album, personal collection, unpublished; Artuk, 2296; Mahāb al-Bakri, "Islamic Coins of the Ilkhānid Period in the Baghdad Museum," (Arabic) *Sumer*, vol. 25, pts. 1–2 (1969), pp. 115–26, no. 851 msm; Sayyid Jamāl Ṭabāṭabāʾī, *Sikkahā-yi Islāmī; Dūraʾyi Ilkhānī va Gurgānī* (Tabriz, 1347/1969), no. 292; Album (above, n. 34); *BMCOR* 10, 238b.

⁴² Donald Wilber, *The Architecture of Islamic Iran: the Il Khanid Period* (New York, 1955), no. 27.

⁴³ Wilber (above, n. 42), no. 34. See also Rashīd al-Dīn's holograph copy of his *Vaqfnāma*, vol. 1, Afshār, ed. (Tehran, 1350/1972). Afshār outlined the contents in "The Autograph Copy of Rashid al-Din's *Vaqfnameh*," *Central Asiatic Journal* 14 (1970), pp. 5–13.

⁴⁴ *Mukātabat-i Rashīdī*, M. Shafiʿ, ed. (Lahore, 1947), no. 51.

⁴⁵ *Nuzhat al-Qulūb* (above, n. 30), text p. 76, and trans. pp. 79–80.

⁴⁶ Type E, 731: Album (above, n. 41). Type F, 33 Ilkhānī: ANS; Album (above, n. 41); al-Bakri (above, n. 41), no. 844; Ṭabāṭabāʾī (above, n. 41), no. 291; 34 Ilkhānī: Album (above, n. 34).

in Tabrīz between 736/1335 and 737/1336.⁴⁷ The coins add economic evidence to that attribution made on stylistic and iconographic grounds and support the hypothesis of the resurgence of activity in Rashīd al-Dīn's atelier.

Another new mint issuing Abū Sa'īd Type F coins is Raṣad (observatory).⁴⁸ Hūlāgū built the most famous of the Ilkhānid observatories in the mid-thirteenth century for Nāṣir al-dīn Ṭūsī at Marāgha.⁴⁹ However, it seems to have ceased functioning during Uljaytū's reign, sometime between 1304 and 1316,⁵⁰ and by 740/1339–40 Ḥamdullāh Mustawfī reported that it was in ruins.⁵¹ Instead, the mint of Raṣad could refer to the observatory that Ghāzān included in his suburb of Tabrīz⁵² or the one in Rukn al-Dīn's complex at Yazd, finished in 725.⁵³ The revival of the Ilkhānid calendar for this type may have necessitated renewed activity in this observatory.

Coins were also issued in places called Ṭā'ūs and Abū Ishāq.⁵⁴ These names have not caused any comment, as Ṭā'ūs was assumed to be a variant spelling of Ṭūs, while the *BMCOR* originally attributed the Abū Ishāq coins to Shaykh Abū Ishāq Injū who later became an independent ruler of Shīrāz.⁵⁵ The second attribution is not possible, for Abū Ishāq Injū did not begin to issue his own coins until 745 when he always in-

⁴⁷ Oleg Grabar and Sheila Blair, *Epic Images and Contemporary History: The Illustration of the Great Mongol Shahnama* (Chicago, 1980).

⁴⁸ 33 Ilkhānī: ANS; Album (above, n. 41).

⁴⁹ Wilber (above, n. 42), no. 9. Aydın Sayili, *The Observatory in Islam and Its Place in the General History of the Observatory* (Ankara, 1960), "The Maragha Observatory." The site has recently been investigated archaeologically by P. Vardjavad, "Rapport préliminaire sur les fouilles de l'observatoire de Maraḡe," *Le Monde Iranien et l'Islam* 3 (1975), pp. 119–24.

⁵⁰ Sayili, p. 213.

⁵¹ *Nuzhat al-Qulūb* (above, n. 30), text p. 87; trans. p. 88.

⁵² Wilber, p. 132, and Sayili (above, n. 49), pp. 226–32.

⁵³ Wilber, no. 67, pp. 160–61; Sayili, pp. 236–44.

⁵⁴ Ṭā'ūs: Abū Sa'īd Type C, 722, Album (above, n. 41); Type E, 729, Album (above n. 41); Album (above, n. 34). Abū Ishāq: Abū Sa'īd Type B, 719, Stephen Album, unpublished British Museum notes; Type D, 724, Album (above, n. 41). Type E, 731, Album (above, n. 34), and 732, Album (above, n. 41); Type F, 33 Ilkhānī, Album (above, n. 41); Artuk, 2295.

⁵⁵ *BMCOR* 6, 654.

cluded his full name with honorific and genealogy.⁵⁶ In contrast, all of these coins are standard Abū Sa'īd types with Abū Ishāq and Ṭā'ūs replacing usual mints such as Tabrīz or Iṣfahān. Both names refer to *zāwiyas* of the Kāzirūniyya order. An order of dervishes, known as the *ṭarīqa ishāqiyya* or the *ṭarīqa murshidiyya*, had developed around the tomb of Shaykh Abū Ishāq (d. 1034) in Kāzirūn.⁵⁷ This order prospered in the second half of the thirteenth century, and by the fourteenth, Ḥamdullāh Mustawfī named four famous *khānqāhs* in Fārs province:⁵⁸ Abdullāh Ibn Khafīf in Shirāz, Ṭā'ūs al-Ḥaramayn in Abarqūh, Abū Ishāq in Kāzirūn, and Rukn al-dīn Dānyāl in Khunj.⁵⁹

It could be argued, perhaps, that by the early fourteenth century these *khānqāhs* were so prosperous and famous that their reknown had eclipsed that of their cities and their names had become synonymous. However, one coin has Kāzirūn on the obverse and Abū Ishāq on the reverse, indicating that the two were distinct.⁶⁰ Furthermore, both names appear concurrently: there are examples of Abū Sa'īd Type F coins from both Abū Ishāq and Kāzirūn and similarly from Ṭūs and Ṭā'ūs.⁶¹ Thus, we are forced to conclude that the towns and their *khānqāhs* were distinct and that the hospices themselves were granted the right to mint coins.

The Kāzirūniyya order was famous for its commercial activities, particularly in international commerce and maritime trade, and had spread as far as India and China. Trimingham called the order a religio-commercial guild specializing in *baraka*-exploitation, a sort of Ṣūfī insurance agency.⁶² Ibn Baṭṭūṭa left a contemporary description of the

⁵⁶ Album, "Muẓaffar" (above, n. 15), p. 162 and n. 24.

⁵⁷ S. Trimingham, *The Sufi Orders in Islam* (Oxford, 1971), pp. 172 and 236; Donald Whitcomb, "Patterns of Sufi Organization in Medieval Southern Iran" (lecture delivered to the 1978 Middle East Studies Association Conference). On Abū Ishāq, see Maḥmūd ibn Uthmān's biography, F. Meier ed., *Firdaus al-Murshidiya: Die Vita des Scheich Abū Ishāq al-Kāzerūnī* (Leipzig, 1948).

⁵⁸ *Tārīkh-i Guzida*, E. G. Browne (London, 1910), p. 793.

⁵⁹ On Khunj, see J. Aubin, "La Survie de Shīlāu et la Route de Khunj-ō-Fāl," *Iran* 7 (1969), pp. 21–37, especially section 4, pp. 25–26.

⁶⁰ Album (above, n. 54).

⁶¹ For the Abū Ishāq and Ṭā'ūs coins, see above, n. 54. Ṭūs, 730, Artuk 2288; Kāzirūn, 729, Album (above, n. 41) and unpublished Ashmolean notes.

⁶² Trimingham (above, n. 57), pp. 172 and 236.

workings of this order: Abū Ishāq's *baraka* was regarded as protection from danger at sea, and stricken seafarers would pledge sums of money to the saint in hope of being safely delivered. When the ships docked, members of the order were waiting to claim the vows. The order also kept meticulous financial records: beggars were given papers with the shaykh's seal such that they could redeem money from people who had pledged. A king of India once pledged ten thousand dinars, and soon a devotee arrived to redeem the vow.⁶³ The coins show that the order was also given minting privileges. What is interesting is the degree to which the Ṣūfī order had become professionalized and institutionalized. Ṣūfism, at least in this order, was no other-worldly asceticism, but a practical, money-making business condoned by the central government.

Lisa Golombek has already described a fourteenth century (ca. 1305–65) group of "Little Cities of God," Ṣūfī shrines at Bisṭām, Naṭanz, Linjān, Jām, and Ardabīl.⁶⁴ These are to be distinguished from the Great Cities of God (Qum and Mashad) which had flourished under Shī'a aegis. All of these Ṣūfī shrines, she noted, were patronized by the clerical class or its affiliates, but in conjunction with the Ilkhānid government or its representatives. She attributed the flowering of these cult shrines to three factors: 1) general prosperity, accounting for the high quality of the architecture; 2) the wealth of the Ṣūfī community; and 3) the institutionalization of Ṣūfism and the regularization of its relationship with authority.

The identification of mints at the Kāzirūniyya *khanqahs* of Abū Ishāq and Tā'ūs al-Ḥaramayn not only supports her conclusions, but also suggests that both sites should be added to her list of the "Little Cities of God." We know that extensive building took place at Kāzirūn, but unfortunately nothing remains. We are better informed with regard to Abarqūh. Andre Godard was the first to draw attention to the spate of buildings which developed there in the early fourteenth century:⁶⁵ additions to the congregational mosque, at least three tombs,

⁶³ Ibn Baṭṭūṭa (above, n. 31), vol. 2, pp. 309–11.

⁶⁴ "The Cult of Saints and Shrine Architecture in the Fourteenth Century," *Studies Miles* (above, n. 26), pp. 419–30.

⁶⁵ "Abarkūh," *Āthār-e Irān*, vol. 1, pt. 1 (1936), pp. 47–74.

a *khānqāh*, as well as the tomb of Sharaf al-Dīn Ḥasan, grandson of Maḥmūd Shāh Injū, the governor of Fārs under Uljaytū and Abū Saʿīd and nephew of Abū Ishāq Injū who eventually established independent Injū control over Fārs.⁶⁶ This architectural boom is another reflection of the economic prosperity of the shrine.

In addition to information about specific cities, these coins underline the peripatetic nature of the Ilkhānid court. One of the major mints was Bāzār, the camp mint.⁶⁷ Presumably this is the same as Bāzār al-Urdū⁶⁸ or al-Maʿmūr Bāzār,⁶⁹ but Bāzār is also used in other combinations such as Bāzār al-Ākhir,⁷⁰ Bāzār Lashkariyya al-Maʿmūriyya,⁷¹ or Bāzār Tūqāt.⁷²

In part this variation in terminology is used simply to fill up space. The word *madīna*, for example, does not have any specific meaning, but is used as a space filler. It often appears on Uljaytū Type C coins which have a large area in the margin reserved for the mint name.⁷³ On the other hand, *madīna* is often, but not always, used before cities with short names such as Yazd or Sāva.⁷⁴ In most cases, these variations are used to fill up space, but they also allude to the lack of fixed meaning for specific words. Thus, Rashīd al-Dīn's section of Tabriz, always called a *Rabʿ* (quarter) in the sources, is designated a *shahristān* on the coins.⁷⁵ Mediaeval writers often used various terms to designate

⁶⁶ I. Afshar, *Yādghārhā-yi Yazd* (Tehran, 1348-1970), vol. 1, no. 220, pp. 362-63.

⁶⁷ This mint is often erroneously listed as Bārān or Bi-Arrān. There are numerous examples of all types of Uljaytū and Abū Saʿīd coins with the exception of Abū Saʿīd Type A.

⁶⁸ Uljaytū Type C, 713: ANS. Abū Saʿīd Type A3, 717: Album (above, n. 41 and n. 34).

⁶⁹ Uljaytū Type C, 715: ANS.

⁷⁰ Abū Saʿīd Type F, 33 Ilkhānī: ANS.

⁷¹ Uljaytū Type C, date illegible: ANS.

⁷² Abu Saʿīd Type A3, 717: ANS, overstrike of Uljaytū Type C, illustrated in Blair, "The Later Ilkhans" (above, n. 1), fig. 14.

⁷³ ANS examples: Āmul, Arz al-Rūm, Arzinjān, Iṣfahān, Tabriz, Sulṭāniyya, Sīvās, and Kāshān.

⁷⁴ Abu Saʿīd Types A2 and A3, 717: ANS.

⁷⁵ See above, p. 13 and n. 46.

the same site, and it is probably wrong to try to attach exclusive functions to specific words.⁷⁶

This variation in terminology is also related to the shift from Arabic to Persian. Mawṣil, presumably still Arabic speaking, maintained the highest standard of classical Arabic: some of its coins have the complete sentence *ḍuriba b'il-Mawṣil*.⁷⁷ In general however, there is a movement towards shortening the legend to *ḍarb* (striking) and dropping the preposition *bi* and the definite *al*, hence making a Persian rather than an Arabic phrase. This increasing formal use of Persian can also be seen in the introduction of the Persian word for city, *shahr*: it is found not only on copper coins,⁷⁸ usually a more local currency, but also on Anatolian issues.⁷⁹ At times, this can cause problems in reading the legend, as it can be confused with the Arabic *shahr fī-shuhūr* (month of months).

Monumental inscriptions also reflect this shift from Arabic to Persian. While Persian had been used for poetic inscriptions on palaces as early as the Ghaznavid period,⁸⁰ under the Mongols it became increasingly popular on tombs⁸¹ and mosques.⁸²

In short, the coins of the later Ilkhānids are unique documents for the history of the period, particularly in view of their broad geographic range, high quality, and most of all, their profusion. On the one hand,

⁷⁶ See Bernard O'Kane's comments in his discussion of the architectural term *buq'a*, "Tāybād, Turbat-i Jām and Timurid Vaulting," *Irān* 17 (1979), pp. 94–96.

⁷⁷ Uljaytū Type B, 710: ANS; *BMCOR* 6, 135; Mahāb al-Bakri, "The Coins of the Sulṭān Uljāytū Khudābanda Muḥammad Khān . . . in the 'Iraq Museum," (Arabic) *Al-Maskūkat*, vol. 1, pt. 3 (1972), pp. 28–45, no. 5327ms.

⁷⁸ Sulṭāniyya, 713, see above, n. 38.

⁷⁹ Abū Sa'id Type A1: ANS, n.d., mint unclear (illustrated in Blair, "The Later Ilkhans" [above n. 1], fig. 5); Album (above, n. 41), 718, Shahr-i Rām (?).

⁸⁰ Alessio Bombaci, *The Kufic Inscription in Persian Verses in the Court of the Royal Palace of Mas'ud III at Ghazni* (Rome, 1966).

⁸¹ Tomb tower at Rādkān, thirteenth century, Wilber (above, n. 42), no. 19; the inscription has been only partially published by Max van Berchem in E. Diez, *Churranische Baudenkmalen* (Berlin, 1918). Tomb of Shaykh Ḥasan Beg, 748, at Sīvās: see Max van Berchem, *Materiaux pour un Corpus Inscriptionum Arabicarum* (Cairo, 1910–17), pt. 3, *Asie Mineure*, no. 26, pp. 40–50.

⁸² Quhrūd, 700: Oliver Watson, "The Masjid-i 'Alī, Quhrūd: An Architectural and Epigraphic Survey," *Iran* 13 (1975), p. 69.

they are contemporary sources useful in elucidating the economic system. They bespeak a centralized empire able to effect change simultaneously from Khurāsān to Anatolia. In a three-tiered arrangement, decisions from Tabrīz were then instituted provincially, but with a certain amount of local autonomy. But they are useful sources for more than just economic historians. In conjunction with written texts, they illuminate political processes, such as the emergence of the *beyliks* in Anatolia. They identify centers of prosperity which, as possible sites of artistic patronage, can be correlated with the monuments and artifacts. Furthermore, they document social processes, such as the institutionalization of Ṣūfism, the peripatetic nature of the Ilkhānid court, variation in terminology, and the shift from Arabic to Persian. The study and publication of further coins will add information and insights which should be of interest not only to numismatists but to all types of historians.

LIST OF ILLUSTRATIONS

(All ANS Coins)

1.	Ⲗ	Abū Sa'īd Type B	719	Tabrīz and Tiflis
2.	Ⲗ	Uljaytū Type B	711	Varāmīn
3.	Ⲗ	Abū Sa'īd Type E	730	Tabrīz
4.	Ⲗ	Abū Sa'īd Type E	730	Tabrīz
5.	Ⲗ	Uljaytū Type C	716	Jurjān (double dirham)
6.	Ⲗ	Uljaytū Type C	716	Jurjān (six dirham)
7.	Ⲗ	Abū Sa'īd local variant a	724	Arz al-Rūm
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10.	Ⲗ	Abū Sa'īd local variant c	729	Sīvās
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A VIRGINIA NUMISMATIC DISCOVERY

(PLATES 30–31)

GRAHAM P. DYER AND PETER P. GASPAR

Eric P. Newman's admirably comprehensive account of the issue of the Virginia halfpenny of 1773 appeared more than twenty years ago.¹ During its preparation he visited the Royal Mint in London, and part of what he wrote was influenced by his examination there of three surviving tools for the Virginia coinage.

In 1910 these three tools were published in the second volume of W. J. Hocking's catalogue of the Royal Mint Museum, where they are described under the heading VIRGINIA in the following terms:²

2833. Halfpenny. Matrix. *Obv.*, laureated bust of King George II to right without armour; no inscription. See coin no. 3916.
2834. Halfpenny. Punch. *Obv.*, as the matrix no. 2833; no inscription.
2835. Halfpenny. Die. *Rev.*, 1773. Crowned and garnished shield charged with the arms of Virginia; the date above divided by the crown; VIRGINIA. See coin no. 3916.

¹ E. P. Newman, *Coinage for Colonial Virginia*, ANSNNM 135 (New York, 1956); "Additions to *Coinage for Colonial Virginia*," *ANSMN* 10 (1962), pp. 137–43. We are grateful to Mr. Newman for encouraging us to write this paper and for many helpful suggestions for its improvement. We thank David Sellwood for carrying out the hardness determination cited herein, and Robert Meaden for the photographic illustrations. The study of the die collection of the Royal Mint by Gaspar has been supported by the National Endowment for the Humanities under grant RC-27870–77–753.

² W. J. Hocking, *Catalogue of the Coins, Medals, Dies and Seals in the Museum of the Royal Mint*, vol. 2, *Dies, Medals and Seals* (London, 1910), p. 119.

Apart from the typographical slip which has transformed George III into his grandfather, there is no reason to doubt the accuracy of Hocking's identification of these tools as Virginian. They are similarly identified, as Hocking knew, in a manuscript catalogue of the die collection prepared by an anonymous Mint officer about 1840, the pencilled annotations in Hocking's hand providing ample evidence of the extensive use which he made of the earlier catalogue.³

Hocking, however, made no attempt to relate the tools to contemporary die records, and indeed he seems to have been unaware that such records might have survived. Yet as it happens there are surprisingly complete die records for the eighteenth century, and their survival, though probably in part fortuitous, may perhaps be taken as a reflection of the tight control which needed to be exercised over such sensitive items as dies.⁴ Thus under the terms of the Mint indentures the engravers were required at intervals ranging from a few months to a few years to produce for inspection all the matrices, punches and dies in their possession so that the numbers could be checked to ensure that none had gone astray.⁵ On these occasions defective or otherwise useless tools were destroyed, while items remaining serviceable were returned to the engravers against a receipt signed by the Chief Engraver. It is these periodic accounts which survive for the greater part of the eighteenth century, and by comparing each return with its predecessor it is possible to work out how many new tools had been made in the intervening period. Better still, for the thirty years from 1743 to 1773 there are additional accounts which record the actual dates on which these new tools were sunk, though unfortunately they do not extend quite late enough into 1773 to include the Virginia halfpenny tools.

What is important in the present context is the discovery in the records that on certain occasions punches and dies were withdrawn from the custody of the engravers and instead of being destroyed were

³ According to Mint records (English Public Records Office [PRO], London, Mint 4/49, p. 231) this volume, now in the Royal Mint library, was presented to the Mint Board on Jan 1, 1845.

⁴ PRO Mint 14/8-13.

⁵ For the indenture of 1817 see the *Report from the Select Committee on the Royal Mint* (London, 1837), Appendix, pp. 11-18.

issued to the Warden of the Mint or to the Mint Office. We are demonstrating in detail elsewhere that there is a remarkable correlation between the tools so withdrawn, the obsolete tools which we know to have been in the possession of the engravers in 1812, and the current holding of eighteenth-century tools in the Royal Mint collection.⁶ Thus with the two-guineas, for instance, four pairs of punches were issued to the Warden, two obverse dies were issued to the Mint Office, and one pair each of matrices, punches, and dies remained with the engravers until 1812.⁷ This corresponds precisely to the current holding of eighteenth-century two-guinea tools, namely one pair of matrices, five pairs of punches, three obverse dies and one reverse die.⁸ When repeated for other denominations the relationship becomes so clear that it leaves little doubt about the accuracy of the records; and it encourages the view that they might provide the key to a deeper understanding not only of the structure and development of the Royal Mint die collection but also of the exact function of the surviving tools.

With the Virginia halfpenny our hopes of making progress along these lines have come tantalizingly close to success. The account of December 12, 1777, which is the first to list the Virginia tools, shows that the following items were then in the possession of the engravers:⁹

	<i>Obverse</i>	<i>Reverse</i>
<i>Matrices</i>	2	2
<i>Punches</i>	2	1
<i>Dies</i>	40	30

Since the previous return¹⁰ precludes the striking of halfpennies in 1773, it seems safe to assume that the 1777 return includes all the tools produced for the coinage, especially as the number of dies comfortably

⁶ G. P. Dyer and P. P. Gaspar, "The Striking of Proof and Pattern Coins in the Eighteenth Century," *BNJ* 50 (1980), pp. 117-27.

⁷ PRO Mint 14/8-13 records the following withdrawals: a pair of punches on Jan. 12, 1702, and on April 20, 1717; two pairs of punches on Dec. 22, 1744; and two obverse dies on Aug. 8, 1768. A pair of matrices, a pair of punches and a pair of dies were in stock on April 14, 1812.

⁸ Hocking (above, n. 2), nos. 415, 417 (matrices); 187, 188, 263, 264, 357, 359, 361, 362, 414, 418 (punches); 358, 360, 416, 419 (dies).

⁹ PRO Mint 14/11.

¹⁰ PRO Mint 14/10.

exceeds the number identified by Newman from his study of the surviving coins.¹¹

At the time of the 1777 return it was decided to destroy a pair of matrices, one of the obverse punches, and all of the dies, leaving the following four tools as the only ones to be returned to the engravers:

	<i>Obverse</i>	<i>Reverse</i>
<i>Matrices</i>	1	1
<i>Punches</i>	1	1
<i>Dies</i>	—	—

These four tools were subsequently produced by the engravers at the inspections on January 26, 1780, November 13, 1782, February 25, 1784, and January 19, 1785.¹² They do not appear, however, at the next inspection on March 29, 1786,¹³ nor at any later inspection.¹⁴

No explanation for their disappearance from the accounts can be found in the die records, but such is the accuracy with which the records were kept that the possibility of error can almost certainly be excluded. The mystery is partly solved by a closer examination of the last account in which the tools appear, that of January 19, 1785.¹⁵ On that occasion a total of 197 tools were, in the contemporary phrase, "left good." This figure includes the four Virginia items, and in the normal way all these serviceable tools would have been returned to the engravers to hold against possible future use. The Chief Engraver's receipt,¹⁶ however, refers not to 197 but to 193 tools, and we think it more likely that the discrepancy of four may be explained by the deliberate withdrawal of the four Virginia tools.

If this is so, our experience suggests that tools deliberately withdrawn ought to survive in the Royal Mint collection. Unfortunately in applying this general principle to the Virginia halfpenny, two very serious problems are immediately encountered. For if the documentary evidence is to be believed, the Royal Mint collection could be expected to contain the following tools:

¹¹ Above, n. 1.

¹² Above, n. 9.

¹³ Above, n. 9.

¹⁴ PRO Mint 14/12, 13.

¹⁵ Above, n. 9.

¹⁶ Above, n. 9.

	<i>Obverse</i>	<i>Reverse</i>
<i>Matrices</i>	1	1
<i>Punches</i>	1	1
<i>Dies</i>	—	—

whereas according to Hocking the actual holding is:¹⁷

	<i>Obverse</i>	<i>Reverse</i>
<i>Matrices</i>	1	—
<i>Punches</i>	1	—
<i>Dies</i>	—	1

This is perfectly consistent for the obverse, but for the reverse it can be seen at once that a punch is missing and that there is a die instead of a matrix. These are problems that cannot be ignored if confidence in the die records is to be maintained.

Taking the surviving die first, it seems to us that the best hope of reconciliation lies in the possibility that it may in fact be a matrix, that is a master tool used for raising punches which in turn are used to sink dies. The design features are incuse on this tool as they would be on a matrix, but this is of course also true of a die, and in its appearance it certainly resembles a die rather than a matrix. It is fully lettered and finished in a way that the obverse matrix is not and that matrices generally are unlikely to have been at that time, while the presence of a slight neck is still more inconsistent with what we know of contemporary matrices. Indeed our work has shown that a neck distinguished a die used for striking proofs¹⁸ and, paradoxically perhaps, it is this which has made us think that there might be some doubt about the precise nature of this tool.

The number of proof coins which were made is undoubtedly small. It follows therefore that very few dies can have been used in their production, so that there should be little difficulty in matching a surviving proof die with the coins. Newman, however, was unable to find either a proof or regular production piece which had been struck from this die, and our own efforts have also been without success.

¹⁷ Hocking (above, n. 2), p. 119.

¹⁸ Above, n. 6.

Fortunately the helpful discovery that this tool is soft and unhardened¹⁹ has gone a long way toward providing an explanation, although the fact that in its present state the tool cannot be used to strike coins does not exclude the possibility that at one time it was hard and could have been used. Nevertheless the survival of a soft die seems curious and raises our hopes that it may not be what it seems. Perhaps it began life as a matrix, was made into a die, and then for the sake of tidy bookkeeping was allowed to remain in the accounts as a matrix. Alternatively it may have been sunk as a die but for some reason was earmarked for use as a matrix should a replacement have been required. Whatever the truth, we would at least claim that the tool now appears sufficiently anomalous for it to be wise to defer judgment on whether it is a matrix or a die.

The second problem thrown up by the die records, that of the missing punch, seems to us the more important of the two. With the die we may suppose that it is our ignorance of eighteenth-century die making which has created a problem where none exists, but in the case of the punch there should really be no room for doubt about whether or not it is in the Mint collection. It was not listed by Hocking,²⁰ but our confidence in the reliability of the die records demanded that a further search should be made in the hope that the punch had survived but had been misidentified. We knew that at the time, punches did not show the complete design and that with designs featuring the Royal Arms it is common to find little more than the outline of the shield, much of the detail of the quarters together with the inscription being left for inclusion by hand on each die. Since the Royal Arms forms the reverse design for many eighteenth-century English coins there are a number of such punches in the collection, and it was perhaps not impossible that among them might be one for the Virginia halfpenny.

Our search was accordingly concentrated in this area, and we quickly found among the tools attributed to George II a reverse punch which Hocking had described as follows:²¹

¹⁹ The Vickers hardness of the die face is 227.

²⁰ Above, n. 2.

²¹ Above, n. 2, p. 24.

371. Guinea. Punch. *Rev.* (pattern), outlines of crowned and garnished shield of arms; the quarterings divided by a plain broad cross.

Hocking's use of the term "pattern" in this context normally indicated that he had been unable to find a coin corresponding to the design of the tool. In looking for a guinea, however, Hocking had perhaps allowed himself to be misled by the earlier catalogue, which had identified the tool as a George II guinea punch.²² Had he compared the punch with the Virginia halfpenny of 1773 he would have been in no doubt that he was handling a reverse punch for the later coin. The dimensions of the shield, the garnishing, the width of the cross separating the quarters all match perfectly those of the Virginia halfpenny, and it can be said with certainty that the missing punch has been found and that an error of identification perpetrated 140 years ago has been corrected.

Our confidence in the eighteenth-century die records has thus been almost fully vindicated. They allowed us to predict that four tools had survived, that two of the four tools would be for the obverse and two for the reverse, that the two obverse tools would be a matrix and a punch, and that one of the two reverse tools would be a punch. All this has turned out to be true. The further prediction that the other reverse tool would be a matrix remains troublesome, but even here we can at least point to a tool which, though to our modern eye looks like a die, could conceivably have been intended for use as a matrix. In the face of this kind of success it is not unreasonable to believe what the records say about how many tools were made for the coinage and, since they show that only one reverse punch was made, the re-discovered punch is revealed as the punch from which all thirty dies were sunk. Unlike the problematical matrix or die, this punch played a vital part in the production of the Virginia halfpennies of 1773.

In looking at this small group of Virginia tools, further specific questions have suggested themselves, and we shall hope to deal with these on a future occasion. For the present our purpose has been to report the discovery of an important item of early American numismatic history.

²² Above, n. 3.

CONFEDERATE ISSUES OF 1864: A REAPPRAISAL

(PLATE 32)

RICHARD G. DOTY

The amount of currency issued by the Confederate States of America under the Act of 17 February 1864 has never been precisely determined. On the basis of about 750, 1864-dated notes in the American Numismatic Society's collection, I arrived at a figure of \$430,665,891, radically lower than earlier estimates, which had run as high as two billion dollars.¹

Recently I was invited to the North Carolina Museum of History to investigate that institution's collection of Southern paper. While my main focus of research was an 1865 hoard (the last payroll of the North Carolina Railroad, which will be discussed in a later monograph), I also wondered whether the North Carolina holdings in 1864 Confederate notes would alter my earlier findings. This certainly seemed possible: the Museum of History has about 7,000 specimens, compared with 750 at the ANS. In fact, it was necessary to revise the earlier figure upward by nearly twenty million dollars, to \$451,394,243. The revised output of 1864 Confederate issues, along with previous figures based on ANS holdings (in parentheses), is given in Table 1.

¹ The methodology employed is detailed in R. G. Doty, "The Confederate Issues of 17 February 1864," *ANSMN* 24 (1979), pp. 257-73.

TABLE 1
Confederate Issues of 1864, by Denomination

<i>Denomination</i>	<i>Original Calculation</i>	<i>Revised Calculation</i>
\$500	\$76,604,000	\$76,604,000
100	86,000,400	94,289,600
50	77,360,000	79,986,800
20	72,822,960	97,021,840
10	89,152,160	91,323,680
5	25,714,520	27,140,640
2	1,811,648	1,813,984
1	668,888	682,384
.50	531,315	531,315
<i>Total</i>	<i>\$430,665,891</i>	<i>\$451,394,243</i>

The highest serial numbers observed on 1864 Confederate notes are given in Table 2. In instances in which the ANS collection contains a note with a higher number, no number is given for the Museum of History collection in Raleigh. After each Raleigh note I have indicated whether or not the note was part of the North Carolina Railroad hoard, and whether or not it circulated, as I am interested in the actual size of the functioning Confederate money supply in 1864-65.

TABLE 2
Highest Serial Numbers Observed on Confederate Issues of 1864

<i>Denomination</i>	<i>Series</i>	<i>ANS</i>	<i>NCMHist</i>	<i>N.C.R.R. Hoard</i>	<i>Other Source</i>	<i>Circulated</i>	<i>Uncirculated</i>
\$500		38302					
100	—	89376	97041	×			×
	1	86842	95131		×	×	
	2	38783	43552		×	×	
50	—	95306					
	1	86002	94755		×	×	
	2	90629					

<i>Denomination</i>	<i>Series</i>	<i>ANS</i>	<i>NCMHist</i>	<i>N.C.R.R. Hoard</i>	<i>Other Source</i>	<i>Circulated</i>	<i>Uncirculated</i>
\$ 50	3	82923					
	4	31940	36321		x		x
20	-	88022	96834		x	x	
	1	98602					
	2	79020	96471		x		x
	3	85841	95299	x		x	
	4	79895	88309		x		x
	5	83791	93776	x		x	
	6	93852	95694		x		x
	7	83733	95113		x	x	
	8	87806	96866		x		x
	9	53067	53143		x		x
	10	38122					
	11	38536	39574		x		x
10	-	131323	143357		x	x	
	1	102933					
	2	98021	98318		x	x	
	3	93825	97890		x	x	
	4	102091	102143		x	x	
	5	95644	96934		x	x	
	6	97168	101170		x	x	
	7	104519					
	8	93354	96836		x	x	
	9	112148	114070		x	x	
	10	83346					
5	-	90452	98217	x		x	
	1	91230	98157		x	x	
	2	90689	94912		x	x	
	3	81216	97040		x	x	
	4	93813					
	5	92363	92796		x	x	
	6	96480	96961		x	x	
	7	6620					
2		113228	113374	x		x	
1		83611	85298		x		x
.50	1	110310					
	2	7760					

Several conclusions can be drawn from Table 2. First, what we might have anticipated with a larger sampling is true: the North Carolina collection contains bills with higher serial numbers than those of the ANS. This occurs in 31 out of 44 cases (roughly three-quarters of the time). Considering the evidence of wear on most of the specimens in Table 2, we can conclude that a figure of \$450 million probably does represent the amount of 1864 currency in circulation. The amount may have been higher; it is unlikely to have been lower.

But another conclusion presents itself. Note that the meaningful differences in serial numbers in Table 2 tend to be concentrated in the earlier series within each denomination. There is a difference of over 13,000 in \$10 notes without a series designation. By the time of the ninth series, the difference is less than 2,000. And the ANS has a tenth series note whose serial number is higher than anything at the museum in Raleigh (83346). In the same way, the difference between the ANS's sixth and seventh series \$5 notes was so great that I expected to find higher series seven material in Raleigh. I did not. Dramatic differences between ANS and North Carolina specimens seem to be confined to notes in the earlier part of the 1864 sequence. It is conceivable that specimens with higher numbers will eventually be uncovered somewhere else, changing these tables. But they are likely to be from early series, not late ones.

A pattern, already glimpsed, becomes clearer: there was a steady, even increasing, volume of currency printing and circulation, followed by an abrupt decline. We cannot assign a precise date to this phenomenon, but the late fall or early winter of 1864 would be a logical choice, based on the number of series spread over time.

To recapitulate, I believe that a figure of around \$450 million for the 1864 issue is about correct. In part, this belief is based on the fact that, in observing 7,000 notes, I was only able to revise my original figure upward by 4.8 percent. It is highly unlikely that any further, dramatic changes will take place.

I did find one note which, were we to take it seriously, would demand a major upward revision. It is a five-dollar bill, serial number 90440, and it purports to come from the seventh series (Plate 32, 1). Since the next highest note in that series appears to be 6620, the discovery of this bill would be something of an event. Unfortunately, the large

series numeral gives away the nature of the piece. The series number, seven, was written in by hand over a four. Notes in the ninety thousand range are common for that series. It is unlikely that the "overnumbered" note is a concoction; it has been in the North Carolina Museum of History since at least 1938,² and there was scant collector interest in the 1864 issues before then. If we add the fact that, under 100-power magnification, the seven seems to be written in the same ink as the signatures, we have further evidence that the bill is likely to be an actual issue of the Confederacy. But what about that serial number?

A clue may lie in the apparent smallness of the seventh series. Assuming that the Confederacy needed money as badly during the period of the seventh series as it did during, say, the sixth, something must have prevented it from printing—or issuing—a like amount of currency. Remembering that Columbia, South Carolina, fell to Union forces in the middle of February 1865 and that Columbia was the source of most Confederate paper money, there is a possible reason for the brevity of the seventh series as well as a possible explanation for this note.

When Confederate authorities evacuated Columbia, they took as much printing equipment, paper, and ink with them as possible, in the hope of resuming production elsewhere. They were apparently never able to do so.³ But could they have issued a few notes from sheets which had been printed but left unsigned at the time of the evacuation of Columbia? It is possible that they could have done so.

Let us suppose that, sometime after the fall of Columbia but before the collapse of Richmond, someone discovered a previously numbered but unsigned sheet of five-dollar bills of the fourth series. Careful doctoring with a pen would have made the notes members of the current—seventh—series, and a pen would have had to do service in the absence of regular printing operations. The number was much higher than anything else in that particular series, but, since general practice during 1864 had been to issue series of 100,000 or more, a note in the

² Conversation with Keith D. Strawn, Curator of Collections, North Carolina Museum of History, 22 February 1982. I am indebted to Mr. Strawn and his colleagues for their great help on my research project and for calling my attention to this note.

³ R. C. Todd, *Confederate Finances* (Athens, 1954), pp. 89–90.

90,000 range was perfectly admissible. Once the series number had been updated, the note could be signed, trimmed, and placed in circulation. Of course, this scenario assumes that numbered but unsigned notes could have escaped the destruction of Columbia, and, indeed, that they could have been numbered and signed at two different times.

Notes could have been numbered first, then signed. Those conversant with Confederate currency will have observed that the inks used for serial numbers and signatures frequently show color differences. It has been my experience that serial numbers, if different from signatures, are usually darker. Considering the homemade quality of Confederate ink, these differences suggest that bills could have been numbered at one point, signed, cut, and distributed at another. And when we consider the layout of the average Confederate note (serial numbers at or near the top, signatures at the bottom), along with the long-sleeved fashions favored by women of the period (and it will be remembered that women signed most Confederate notes),⁴ it would make good sense to number the notes top-to-bottom, then set them aside to dry, to avoid smudging one's sleeves or the notes themselves. The rest of the process could be done at a later time.

All of this is speculation, and it does not alone explain the overnumbered note. It merely makes it somewhat more understandable. But there is another bit of evidence which does seem to address the problem directly. For there is a note in the ANS collection of the seventh series (without any overdating or related embellishments), whose right-hand signature is almost certainly the same as the one on the overdated note (Plate 32, 2). Whether we can explain it or not, it seems obvious that these two notes are related, and were issued at the same time.

⁴ R. P. Thian, *Register of the Confederate Debt* (Washington, 1880; repr. Boston, 1972), pp. 3-4.

Plate 1



1.s



2.q



3.d



4.b



5.b



6.d



Metrophanes

Wreathed Tetradrachms of Kyme

Plate 2



7.c



8.a



9.a



10.e



11.d



12.a



Metrophanes
Wreathed Tetradrachms of Kyme

Plate 3



12.b



13.b



14.a



15.a



16.a



17.c



Kallias

Wreathed Tetradrachms of Kyme

Plate 4



18.a



19.k



20.d



21.j



22.h



23.b



Kallias

Wreathed Tetradrachms of Kyme

Plate 5



24.a



25.a



26.a



27.a



28.d



29.c



Kallias

Wreathed Tetradrachms of Kyme

Plate 6



30.a



31.d



32.b



33.a



34.c



35.a



Kallias

Wreathed Tetradrachms of Kyme

Plate 7



36.a



37.b



38.b



39.b



40.f



Kallias and Straton Wreathed Tetradrachms of Kyme

Plate 8



41.f



42.a



43.a



44.c



45.b



46.a



Straton

Wreathed Tetradrachms of Kyme

Plate 9



47.a



48.a



49.d



50.a



51.d



Straton and Olympios Wreathed Tetradrachms of Kyme

Plate 10



52.i



53.b



54.a



55.k



56.a



57.b



Olympios and Euklemon
Wreathed Tetradrachms of Kyme

Plate 11



58.a



59.a



60.a



61.c



62.a



63.d



Seuthes and Demetrios Wreathed Tetradrachms of Kyme

Plate 12



64.a



65.e



66.a



67.a

68.a



Herakleides and Philodoxos Wreathed Tetradrachms of Kyme

Plate 13



69.a



70.a



71.a



72.a



73.a



74.a



Philodoxos, Alexandros, and Diogenes
Wreathed Tetradrachms of Kyme

Plate 14



75.a



75.a



76.b



77.b



78.a



79.a



Diogenes and Amphikiyon
Wreathed Tetradrachms of Kyme

Plate 15



1



2



3



4



5



6



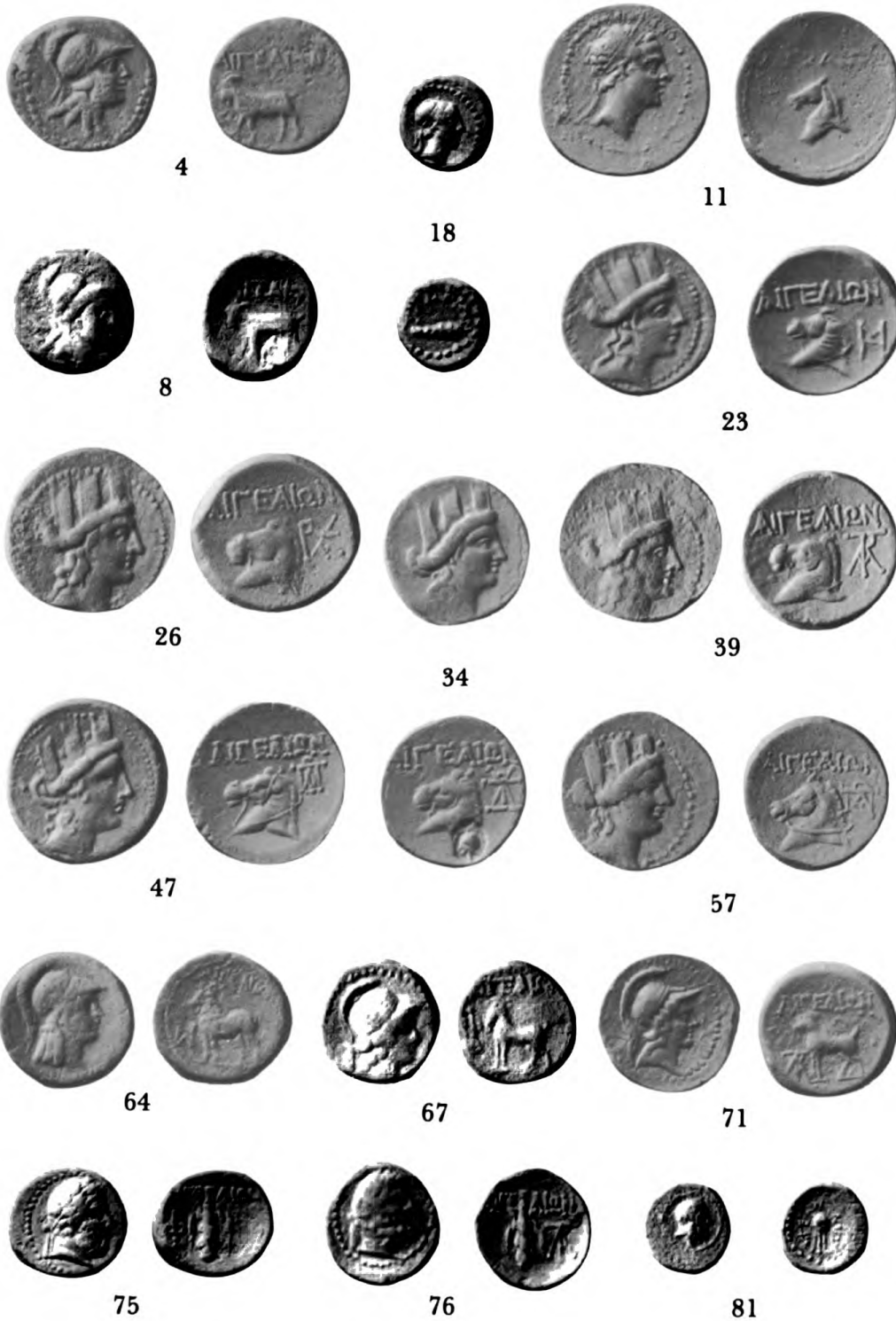
Portrait Tetradrachm of Eumenes II

Plate 16



Portrait Tetradrachm of Eumenes II

Plate 17



Hellenistic Coins of Aegeae

Periods 1-3

Plate 18



87



102



95



101



104



108



120



113



109



109



125



128



Hellenistic Coins of Aegeae

Period 4

Plate 19



136



110



136



146



151



153



111



153



157



159



163



164



Hellenistic Coins of Aegeae

Period 4

Plate 20



166



167



170



173



178



188



182



186



189



190



193



194

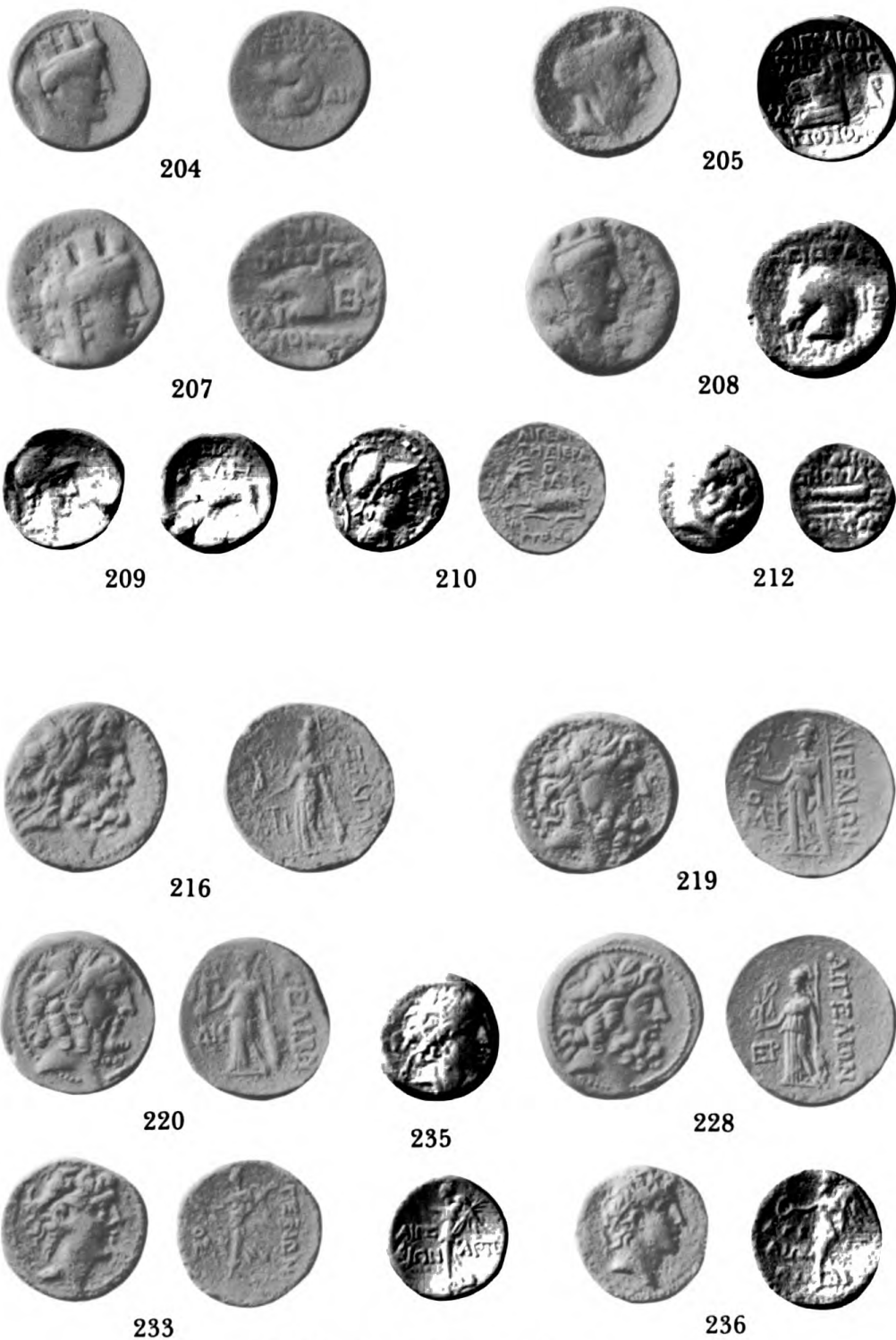


199



Hellenistic Coins of Aegeae Period 4

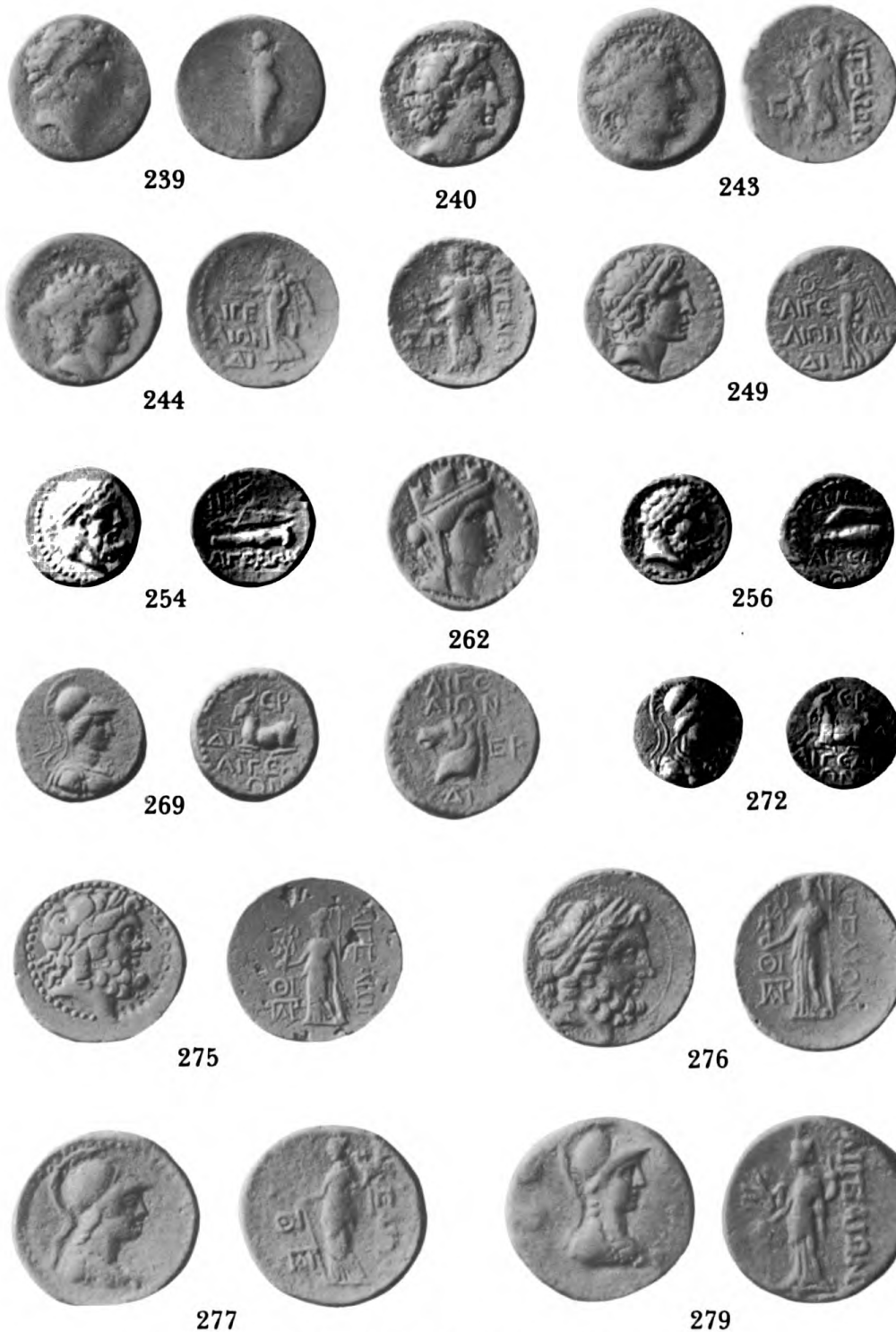
Plate 21



Hellenistic Coins of Aegeae

Periods 5-6

Plate 22



Hellenistic Coins of Aegeae
Period 6

Plate 23



Caracalla or Elagabalus?

Plate 24



9a



9b



9c



10a



10b



11a



11b



12



Caracalla or Elagabalus?

Plate 25



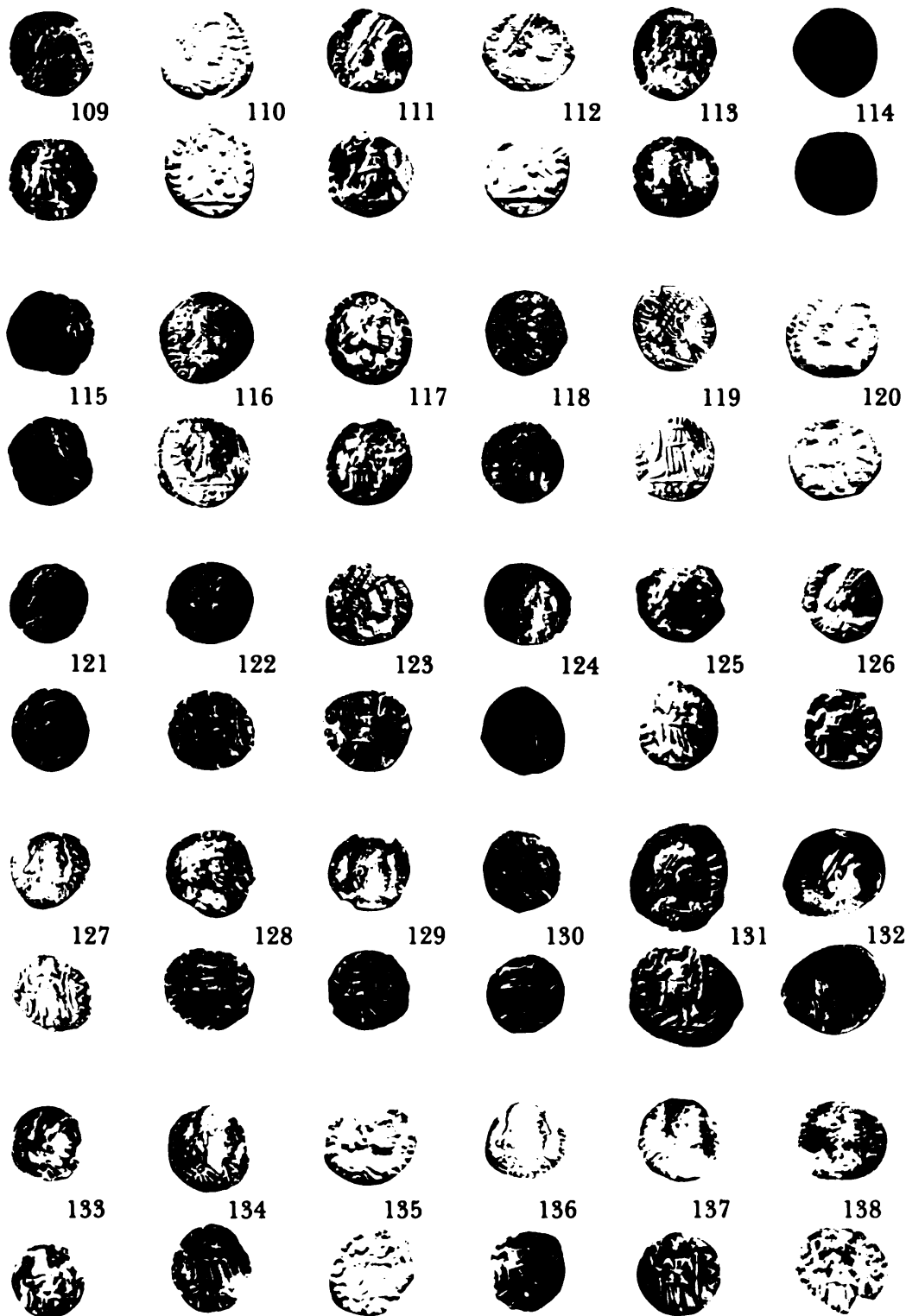
Vandal Silver Coinage

Plate 26



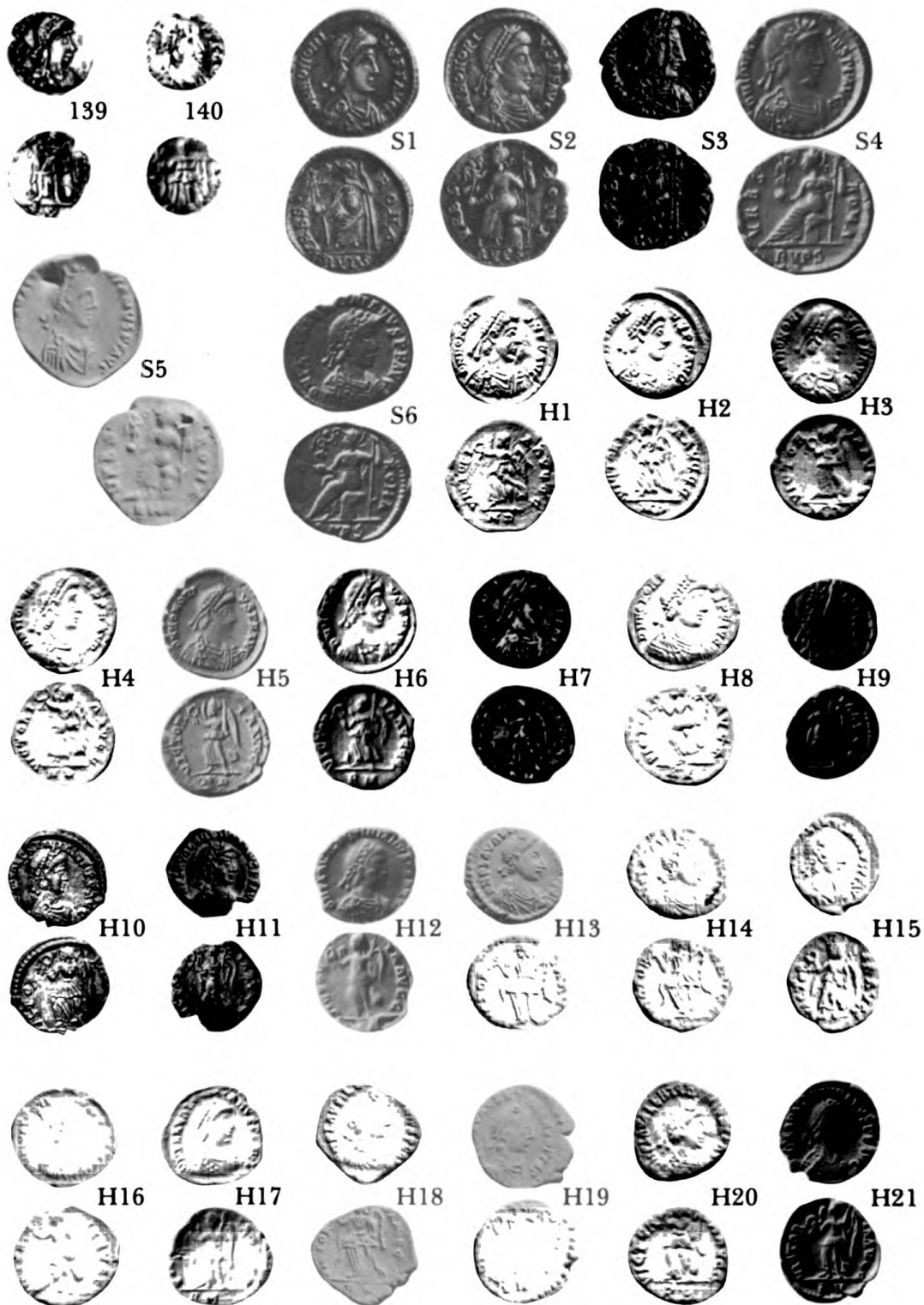
Vandal Silver Coinage

Plate 27



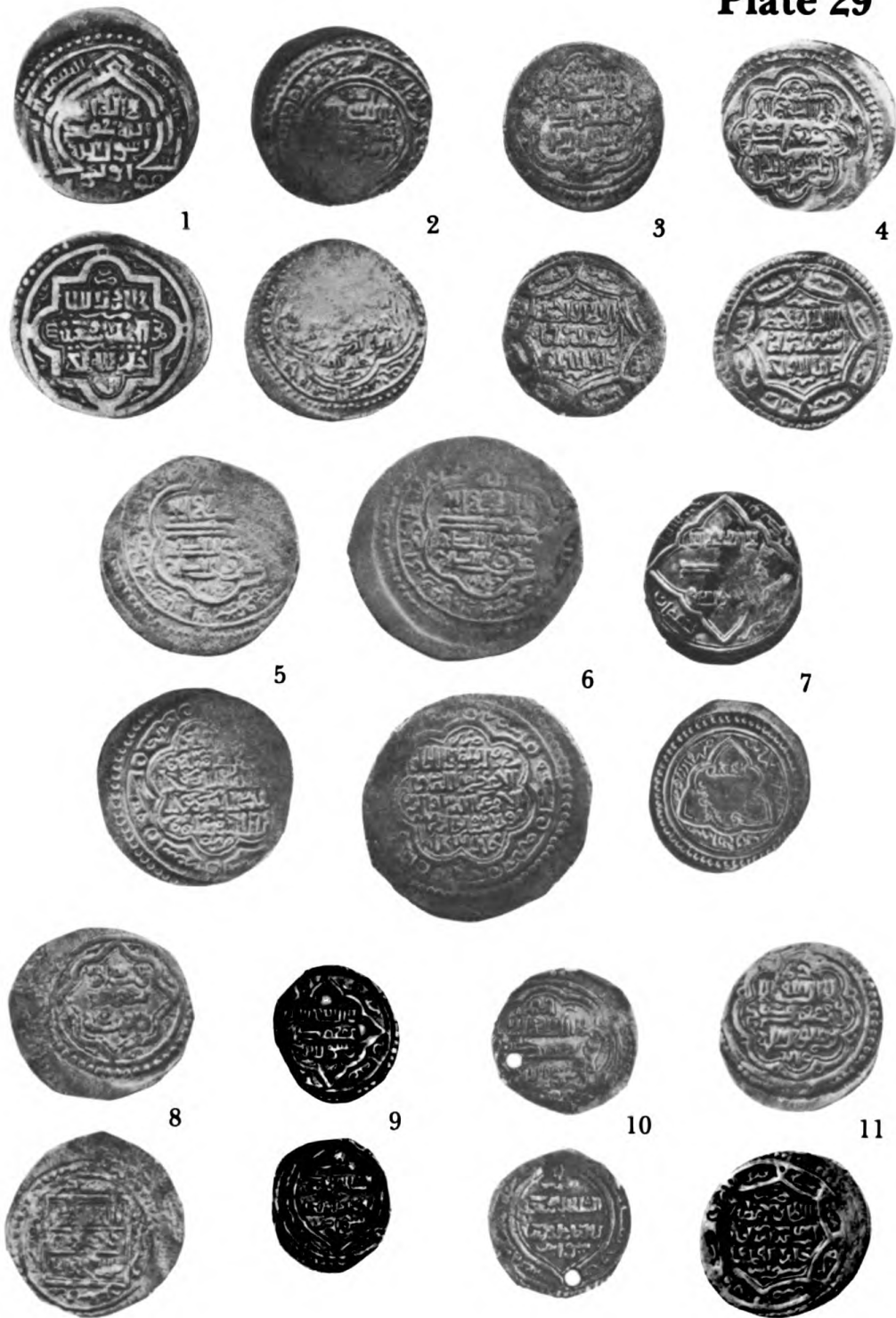
Vandal Silver Coinage

Plate 28



Vandal Silver Coinage

Plate 29



Coins of the Later Ilkhānids

Plate 30



Punch, Hocking 2834

Matrix, Hocking 2833

Virginia Numismatic Discovery

Plate 31



Punch, Hocking 371

Matrix or Die, Hocking 2835

Virginia Numismatic Discovery

Plate 32



Confederate Issues of 1864: Reappraisal

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MUSEUM NOTES

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MUSEUM NOTES

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THE CHRONOLOGY OF THE FOURTH-CENTURY B.C. FACING-HEAD SILVER COINAGE OF LARISSA

(PLATE 1)

THOMAS R. MARTIN

The mint of Larissa was the most important and the most prolific civic mint in classical Thessaly. To judge from modern collections and the contents of hoards, a great deal of the mint's production came in the fourth century B.C. when the standard obverse type became a female facing head portrayed in a three-quarter view. More than fifty years ago, Fritz Herrmann published what remains the only attempt to establish a chronological arrangement for this important coinage in his article on the silver coinage of Larissa in Thessaly.¹ Since these numerous issues are distinguished only by often subtle variations in their obverse and reverse types and not by any overt indications of chronology, Herrmann's chronological scheme depended almost exclusively on his own criteria of style. He settled on ca. 395 B.C. as the date of the introduction of the new facing-head issues and 344/3 B.C. as the date when these coins ceased to be produced. Since these are the final issues of the city's mint, 344/3 B.C. also became the date when the minting of silver coinage at Larissa came to an end permanently.

¹ "Die Silbermünzen von Larissa in Thessalien," *Z/N* 35 (1924-25), pp. 1-69, hereafter cited as "Herrmann." Additional abbreviations are: *ACGC* = Colin Kraay, *Archaic and Classical Greek Coins* (Berkeley, 1976); and *CH* = *Coin Hoards* vols. 1-6 (London, 1975-81).

As we shall see, Herrmann established these chronological termini with historical rather than numismatic arguments.² His procedure was in itself reasonable, but in this case the arguments are too weak to stand. The lower terminus in particular, which carries with it important implications for numismatic and political history, is disturbing because Herrmann based it purely on the assumption that Philip II of Macedon suppressed the coinage of Larissa in 344/3 B.C. This notion was apparently too self-evident to require any documentation, and Herrmann offered none.

In fact, the question of the date of the end of civic coinage at Larissa is extremely difficult to answer with precision and assurance on current evidence. Nevertheless, the hoard evidence published since the appearance of Herrmann's article, although far less copious than one would like, indicates that the end of silver coinage at Larissa cannot be as early as 344/3 B.C. and, furthermore, that Herrmann's chronological arrangement of the fourth-century facing-head issues is suspect. The evidence calls for a re-examination of his scheme and the outlining in at least preliminary fashion of a new arrangement for these issues.³

A full-scale treatment of the chronology of these issues could only be attempted if a comprehensive die study were made of the enormous amount of material from the Larissa mint that survives in modern collections. Since that sort of study is not in immediate prospect for practical reasons, it seems desirable for the present to begin work on this coinage based on the currently available evidence. That evidence comes from Herrmann's own work and from hoards that have been well enough published to identify the coins of Larissa which they contain.⁴ Many hoards that might contribute to this work do not fall into this category. I hope in time to be able to assemble by correspondence and autopsy the precise information on types and conditions of wear that will help to test and to refine the hypotheses that are formulated in this study.

² Herrmann, pp. 41, 50–51 (upper terminus); pp. 49, 58–59 (lower terminus).

³ This study will focus almost exclusively on silver coinage. The bronze coinage of Larissa appears too infrequently in hoards to be studied in detail by the method adopted in this paper.

⁴ The information on hoards comes in the first instance from *IGCH* and *CH*, vols. 1–6. Original publications have been consulted when they exist.

HOARDS AND THE END OF SILVER COINAGE AT LARISSA

The broadest indication of chronology for these Larissan issues comes from the statistics on their occurrence in hoards. That is, one can hypothesize that the appearance of very small numbers of these coins in hoards of a certain period from an area where the coins are more numerous in hoards of earlier periods indicates that minting had severely declined or ceased. For this study, the obvious area to investigate is Thessaly. Coins of Larissa are very common in Thessalian hoards of the fourth century and become less common in hoards of the third century, but their almost complete absence from hoards of the second century points immediately to a terminus ante quem of ca. 200 B.C. for the end of civic coinage at Larissa. Of the 19 Thessalian hoards on record for the period ca. 200–100 B.C., only one has any coins of Larissa.⁵ This numismatic evidence correlates with the historical evidence because the coinage of the reorganized Thessalian confederacy of the early second century served in place of civic coinages such as that of Larissa.⁶

Further evidence from hoards shows that the date for the end of coinage at Larissa comes much earlier than ca. 200 B.C. From published sources, I can identify 18 hoards of silver coins which were discovered in Thessaly (including the southern perioikic area) and have been assigned dates later than ca. 300 B.C. but earlier than the mid-second-century date of the first Thessalian hoards to contain coins of the Thessalian confederacy. Only seven of these hoards have coins of Larissa, and two of these include only a single specimen. Three of the five

⁵ *CH* 6, no. 35 (5, no. 42): 3+ Larissa drachms in a total of 450+. The other eighteen hoards are *IGCH* 214, 220, 228, 234, 237, 239, 247, 289, 304, 305, 306, 313, 314, 315; *CH* 1, no. 83, 3, no. 57, 4, no. 56, 5, no. 45.

⁶ On the establishment of this new federal organization, see J. A. O. Larsen, *Greek Federal States* (Oxford, 1968), pp. 281–94, especially p. 291 on its coinage. The silver coins of the Thessalian League are very common in Thessalian hoards of the second century: *IGCH* 239 with 1 of 52; 247 with only League coins, a total of 75+; 313 with 1192+ of 1199+; 314 with only League coins, a total of 36 (possibly part of no. 313); 315 (see *CH* 5, no. 45) with only League coins, a total of 203+; *CH* 1, no. 83, with only League coins, a total of 50+; 3, no. 57, with only League coins, a total of 38.

remaining hoards have small numbers of coins of Larissa, with only *IGCH* 168, a mid-third-century hoard, containing a large number of these coins, 156 of a total of 591.⁷ As shall be shown, the coins of Larissa in this hoard are all the same type and generally quite worn. This evidence from the third century clearly contrasts with that based on Thessalian silver hoards from the fourth century. There are 22 such hoards, 11 of which contain coins of Larissa.⁸ Furthermore, the coins of Larissa represent 10% or more of the contents of 10 of these 22 hoards. The comparable statistic for hoards post 300 B.C. is three of 31. In sum, the pattern of the statistics on the frequency of the appearance of coins of Larissa in Thessalian hoards suggests that the mint of Larissa was no longer producing silver coins at least by the last half of the third century B.C.

It is difficult to estimate how early the terminus of this coinage can safely be put, as figures concerning the frequency of appearance in hoards are far too imprecise an indicator of chronology to provide any further help in this investigation. Rather, conclusions must be drawn from another indicator, an analysis of the comparative state of wear of the coins of Larissa and the coins of the Macedonian kings that appear together in hoards. Since the Macedonian coins can be more accurately dated on external criteria than can the coins of Larissa, this comparison can be exploited in the search for a plausible chronology of the facing-head issues.

Seventeen hoards are recorded as containing silver coins of Larissa and Macedonian regnal coinage, but regrettably, information on the state of wear of the relevant coins is available for only five of these

⁷ In the following list, the identification number of each hoard is followed by the number of Larissan coins and the total number of coins in the hoard. *IGCH* 117, 1 of 38; 133, 0 of 11+; 141, 0 of 16; 144, 0 of 115; 146, 1 of 26; 150, 0 of 5000–7000; 159, 0 of 61; 162, 5 of 30; 168, 156 of 591+; 220, 0 of 10+; 228, 0 of 130; 234, 0 of 100–150; 237, 0 of 2500–3000. *CH* 1, no. 52, 0 of 75+; 3, no. 43 (2, no. 72), 4 of 38+; 4, no. 56, 0 of 162+; 6, no. 24, 26 of 569; 6, no. 35 (5, no. 42), 3+ of 450+.

⁸ *IGCH* 45, 0 of 92+; 49, 0 of a small number; 52, a large number of ca. 2000; 55, 2 of 4+; 56, 7 of 16–18+; 57, 2 of 6; 58 (including *CH* 4, nos. 20–21, 5, no. 20), 541+ of 626+; 61, 13+ of 20+; 62, 0 of 1647+; 71, uncertain; 80, 0 of 12; 82, 0 of 37+; 93, 0 of 112; 96, 2 of 13; 97, 0 of 16; 111, 10 of ca. 69. *CH* 1, no. 25, 0 of 149; 1, no. 27, 0 of 6; 1, no. 33, 0 of 4+; 1, no. 40, 10 of 90+; 2, no. 51, 1 of 9+; 6, no. 20 (2, no. 52), 1 of 7.

hoards as a result of the generally brief publications of the hoards in question.⁹ Nevertheless, it is possible to make some progress on this scanty evidence toward the construction of a cumulative case for a lower terminus for the facing-head issues of Larissa. Throughout this discussion I will refer to the facing-head issues, Herrmann's group 7, by means of Herrmann's alphabetically designated series, which will be discussed in detail later in this paper.

IGCH 385 from Macedonia, now dated by Georges Le Rider to ca. 337/6 B.C., has 62 drachms of Larissa from a total of at least 240 silver coins, of which 136 lifetime tetradrachms of Philip II are the most recent coins. Fifty-four tetradrachms and two drachms are illustrated in the published reports. Sixty of the drachms are the facing-head type, Herrmann's group 7, of which it seems 58 are series A or M.¹⁰ The other drachms represent one specimen of series B, one of series C, E or F, and two of group 6 (not facing-head types).¹¹ The very limited size of the illustrated Larissa sample of course makes any conclusions tentative at best, but it is noteworthy for the sake of the cumulative force of the evidence that the two illustrated drachms are as little worn, if not less, than the majority of the tetradrachms, even those which Le Rider has identified as the most recent series of Philip's coins in the hoard, Pella group 2 A 2 (see, e.g., nos. 221 and 232 in Le Rider, pl. 10). For example, one can compare the condition of the hair and of the nose

⁹ These 17 hoards are *IGCH* 70, 74, 76, 111, 117, 146, 162, 168, 385, 386; *CH* 1, no. 37, 1, no. 40, 2, no. 51, 3, no. 43 (2, no. 72), 6, no. 20 (2, no. 52), 6, no. 24, 6, no. 35 (5, no. 42).

¹⁰ I will argue below that Herrmann's series A and M in fact represent only one series, which I will call A-M, with a subgroup to be called A-M 168.

¹¹ The original notice of this hoard is by Irene Varoucha-Christodouloupoulou, "Athenai-Antike," *ADelt* 19 (1964), pt. 2, 1 *chronika*, p. 8, pl. 1, nos. 2-7 (Philip), 8-9 (Larissa). The coins are fully described (except for the state of wear) and the date for the hoard is given by Georges Le Rider, *Le monnayage d'argent et d'or de Philippe II frappé en Macédoine de 359 à 294* (Paris, 1977; hereafter cited as "Le Rider"), pp. 286-89, 341-42, hoard no. 4. He illustrates 48 tetradrachms.

According to Le Rider, 58 drachms "appartiennent à la série courante (tête de la nymphe Larissa presque de face/cheval paissant)," which I take as a description of the type I will refer to as A-M. His catalogue does not allow a decision on whether the one specimen belongs to series C, E or F. Varoucha illustrates an A-M 168 and an A-M drachm respectively.

on the Larissa obverses, raised areas which are very susceptible to wear on this type of coin, with the condition of the hair and beard of the tetradrachm obverses. Similarly, the details of the representation of the horse on the reverse of the drachms appear to be, if not better, at least as well preserved, as comparable features on the horse on the tetradrachm reverses. Since smaller denominations like drachms tend to show wear more quickly than do larger denominations like tetradrachms due to their smaller surface area and faster circulation, it is worth pointing out that the drachms are as well preserved as the tetradrachms of Le Rider's thunderbolt-N series and are in fact better preserved than most of the tetradrachms which he places before this series. (See, for example, 187a and 193 in his pl. 8.) The evidence of *IGCH* 385 is certainly no barrier to believing that some of the facing-head issues of Larissa in the hoard are at least contemporary with the issues of Philip, the most recent of which Le Rider dates to the period ca. 342/1–ca. 337/6 B.C. Since under Herrmann's system the two drachms illustrated from *IGCH* 385 belong to his group 7, series A or M (as do 56 other coins in the hoard) and are therefore to be dated to ca. 395–363 B.C., it is easy to see how Herrmann's chronology of the facing-head issues is at variance with the hoard evidence.

Unfortunately it is impossible at this time to make a complete analysis of the comparative state of wear of the relevant coins of *IGCH* 386 from Macedonia ca. 340 B.C. Four of its 18 silver coins are drachms of Larissa, and the most recent coins are two lifetime tetradrachms of Philip. Both the tetradrachms and two of the drachms are illustrated in the publications of the hoard.¹² Of these four coins the most severely worn is Larissa drachm b, an example of Herrmann's series Q whose condition is not noted in the original publication (Plate 1, 1).¹³ The other drachm which is illustrated, a, belongs to series C and is rated "bien." The two tetradrachms from Le Rider's group Pella 2 A 1 receive "très bien"

¹² The original publication is by Irene Varoucha-Christodouloupoulou, "Acquisitions du Musée Numismatique d'Athènes," *BCH* 86 (1962), pp. 417–18, pl. 9, nos. 4 (Philip), 5–6 (Larissa a and b). See Le Rider, p. 285, hoard 3, pl. 7, no. 169a, for the other tetradrachm.

¹³ The reverse type, the rare dolphins on the obverse, and the treatment of the neckline clearly place this coin in series Q, which I will discuss below. The head on the obverse is gazing left, a variation not listed by Herrmann.

ratings, as do the two remaining drachms of Larissa. Although they are not illustrated, the published references show that these drachms belong to one of Herrmann's series K to M 1.¹⁴ Difficulties in Herrmann's chronology immediately arise because the less worn Larissa drachms should according to Herrmann be dated to ca. 370–363 B.C., even though they are of a smaller denomination and apparently comparable in condition to the tetradrachms of ca. 348/7–ca. 343/2 B.C. Moreover, the drachm b, apparently significantly more worn than the drachms of series K to M 1, should by the same scheme be dated ca. 361–353 B.C. as part of series Q. It is of course impossible to draw firm conclusions from the condition of so few coins, but again this evidence is worth recording as part of the cumulative case in favor of a revised chronology of the facing-head issues.

The photographs provided with *Coin Hoards* 2, no. 52 (6, no. 20), permit a judgment on the state of wear of another relevant but tiny selection of coins. Discovered in Thessaly, of its seven coins the hoard includes one facing-head drachm of series A or M and, as its most recent coins, two tetradrachms of Alexander III from Babylon and one drachm from Miletus of Alexander III which belongs to the period ca. 325–323 B.C.¹⁵ A comparison of the wear on this coin with that on the comparable denomination from Larissa indicates that the latter coin is in similar, perhaps even better condition. Both coins show signs of wear on the raised surfaces of the obverse, but the Larissa drachm seems to have a less worn reverse with a clear, sharp legend even below the ground line, a spot where wear is common on this type. The one illustrated Alexander tetradrachm is better preserved than either of the drachms with almost no visible signs of wear, while the tetradrachm of Philip, a posthumous issue from ca. 336/5–ca. 329/8 B.C., is comparably worn, especially on the obverse.¹⁶ Since the Larissa drachm belongs to series A or M, dated ca. 395–363 B.C., the evidence of this hoard, too, undermines faith in Herrmann's chronology.

¹⁴ Varoucha (above, n. 12), p. 418.

¹⁵ This coin is part of the Π series, on which see Margaret Thompson, *Alexander's Drachm Mints I: Sardes and Miletus*, ANSNS 16 (1983), pp. 43–50.

¹⁶ The coin belongs to Le Rider's group Pella 2 B, nos. 376–82.

No further information is currently available on other fourth-century hoards with coins of Larissa and Macedonia, but there are two third-century hoards to consider, one of which fortunately contains a large sample of relevant coins. The smaller hoard, *Coin Hoards* 3, no. 43 (2, no. 72), is from Thessaly ca. 229–228 B.C. The evidence of this hoard is problematical because the pattern of wear of the various issues included in it is very inconsistent and misleading.¹⁷ The four drachms of Larissa which the hoard contains are severely worn, as one would expect of fourth-century issues by the date of this hoard. Likewise, the three Alexander drachms also show signs of much wear, although perhaps less than the coins of Larissa. However, all the drachms are so worn that it is probably futile to argue that one group is significantly more worn than the other, especially in the light of the peculiar pattern of wear exhibited in the hoard as a whole. The Larissa drachms are from series A or M. The Alexander drachms unfortunately cannot be identified precisely from the published photographs, but they are probably posthumous issues from the period ca. 320–300 B.C.¹⁸ One perhaps would be justified in assuming that the Larissa drachms are roughly contemporary with or slightly older than the Alexander drachms, but such a judgment cannot be made with confidence. Criteria of comparative wear necessarily become more unreliable after coins have circulated for as long as these drachms seem to have done and therefore have become so very worn.

The one large hoard which I have examined personally is *IGCH* 168 from near Larissa, dated ca. 250 B.C. or perhaps later.¹⁹ The relevant coins are 156 facing-head drachms of Larissa, series A or M, and 288 drachms of the standard Alexander type with the legends of Alexander, Philip III and Lysimachus. Almost all these Alexander-type drachms belong to the period ca. 325–300 B.C., but some of them are as recent as ca. 290 B.C. As a group the Larissa drachms are quite worn, as are the Alexander-type drachms except for the most recent examples. On the whole, the Larissa drachms are comparable in condition to the

¹⁷ J. Morineau Humphris, *CH* 3, pp. 10–13, points this out.

¹⁸ I am indebted to Margaret Thompson for this information.

¹⁹ T. R. Martin, "A Third-Century B.C. Hoard from Thessaly at the ANS (*IGCH* 168)," *ANSMN* 26 (1981), pp. 51–77.

lifetime Alexander drachms and perhaps the early posthumous issues. For example in Plate 1, compare three typically worn Larissa drachms from this hoard, 2–4, with a lifetime Alexander drachm of Salamis, 5, and two of Miletus dated ca. 325–323 B.C., 6–7.²⁰ Since the size of the sample is larger in this case than in the others previously discussed, greater confidence can be placed in an analysis of comparative wear. In fairness to the evidence, however, an additional reservation must be admitted. Since *IGCH* 168 cannot have been hidden before the middle of the third century,²¹ the fourth-century coins in the hoard could have circulated for over fifty years before their extraction from circulation for hoarding. In that span of time, a small denomination such as the drachm could be subjected to so much use that even coins of significantly different dates of issue could be worn down to a similar state of poor preservation. Alternatively, coins of the same date could exhibit different degrees of wear if some of them had been withdrawn from circulation for a period of time, as could have happened if some of the coins had been previously hoarded and then restored to circulation before being hoarded for the final time. In short, it would be foolhardy to claim undue precision or reliability for any conclusions based on an analysis of comparative states of wear. Nevertheless, the evidence of *IGCH* 168 is certainly striking because it agrees with the evidence of the other hoards already surveyed: coins dated by Herrmann early in the fourth century, in this case ca. 395–363 B.C., exhibit a pattern of wear comparable to that of coins of demonstrably more recent date, in this case of the 320s B.C., and perhaps a little beyond. To sum up, the evidence from published hoards militates against the assumption that the silver issues of Larissa ended as early as 344/3 B.C. and reveals serious problems in the chronology established by Herrmann for his group 7, the facing-head issues. As a result, there is a need to establish a more plausible date for the closing of the civic mint at Larissa and to examine the standard chronological arrangement of these coins.

²⁰ The Salamis drachm is no. 495 in Martin (above, n. 19); the Milesian drachms are nos. 107a and 118b in Margaret Thompson's study (above, n. 15).

²¹ Martin (above, n. 19), pp. 66–70.

The 156 drachms of Larissa in *IGCH* 168 constitute the second largest group of coins of Larissa yet found in a single hoard.²² In view of the large number of these drachms in the hoard, it is extremely remarkable that all these coins are one main type with a female facing head, three-quarters left on the obverse and a horse with three or four legs bent, grazing right on the reverse (Plate 1, 2–4). In no other recorded hoard with a sizable group of drachms of Larissa do we find this consistency of type. For example, *IGCH* 58 has at least ten different types.²³ Also noteworthy is the variety found in the types which closely resemble the one type found in *IGCH* 168. For example, in *IGCH* 58 the facing head can be left or right, as can the horse.²⁴ Significantly, *IGCH* 58 includes no Macedonian regnal coinage and therefore probably belongs to the second or third quarter of the fourth century before the coins of Philip and Alexander had made their way into Thessaly.²⁵

As A. R. Bellinger was the first to point out, the startling uniformity of type of the drachms of Larissa in a third-century hoard should indicate that these coins are the most recent issues of the mint of Larissa;²⁶ otherwise, we would expect to find other contemporary or later types mixed in. But Bellinger's acute observation on the uniformity of types in *IGCH* 168 cannot be reconciled with Herrmann's chronological scheme. According to Herrmann all the coins of Larissa belong to series A or M and should therefore not have been issued after ca. 363 B.C.;²⁷ if this dating were correct, *IGCH* 168 with its large number of coins of Larissa should then definitely contain at least some of Herr-

²² *IGCH* 58 (ca. 350 B.C. ?) has 266 drachms of Larissa, a total which can be raised to 541+ with the addition of *CH* 4, nos. 20–21; 5, no. 20.

²³ See n. 77. Notice of *CH* 6, no. 24 (270 B.C. with 25 Larissa drachms), reached me just as this article was going to press.

²⁴ See, e.g., coins 7 and 18 in fig. 1, *ArchAnAth* 2 (1969), p. 106.

²⁵ Since none of Philip II's coins turns up in Thessalian hoards earlier than late in the reign of Alexander (*IGCH* 80), the absence of Philip's coins from a Thessalian hoard does not mean that the hoard could not have been hidden as late as 340–330 B.C. Tony Hackens, in a general meeting (*RBN* 1967, p. 250), dated the hoard "d'avant Philippe II."

²⁶ "The Thessaly Hoard of 1938," *Congresso internazionale di numismatica Roma 1961*, vol. 2 *Atti* (Rome, 1965), pp. 57–60. Cf. *ACGC*, p. 117.

²⁷ That is, Herrmann's lower terminus for series M. The end of A he put in 370 B.C. See Herrmann, pp. 41, 44.

mann's later issues. In addition, the presence of a large number of the coins of Alexander in the hoard in contrast to the complete absence of the coins of Philip II represents a circumstantial argument in favor of placing the lower terminus of this type of Larissa drachms substantially later in the fourth century than Herrmann did.

Taken by itself, *IGCH* 168 presents a readily comprehensible picture of the fate of the silver coinage of Larissa. The earlier preference for a multiplicity of types and marked variation in similar types was abandoned in favor of an almost uniform type. This change probably took place some years or even decades before the closure of the mint, and in the ensuing period the older, more diverse types gradually disappeared from circulation as they were replaced by the new uniform issues. These final issues of Larissa continued to circulate for quite some time and became generally well worn because the mint was no longer open to receive and restrike worn silver. Since the new drachms of Alexander began to appear in Thessaly in large numbers in the last decades of the fourth century, they eliminated the necessity to renew local production of the customary drachm coinage even if conditions permitted the reopening of the city mint in, say, the early third century. But, the retention of Herrmann's chronology for the facing-head issues of Larissa would make *IGCH* 168 evidence for dating the end of this coinage no later than 363 B.C., an impossibly early date. It is time to examine his system in detail.

HERRMANN'S CHRONOLOGY

Herrmann arranged the facing-head issues of Larissa in chronological order from older to more recent primarily on the assumption of a gradual deterioration of the style of the female head on the obverse. The less the Larissa obverse resembled its model, the Kimonian Arethusa of Syracuse (Plate 1, 8), the more distant in time it had to be from its inspiration, or so the argument goes by implication.²⁸ Herrmann divided

²⁸ On the Arethusa type of Kimon and its imitation at Larissa, see Katherine P. Erhart, *The Development of the Facing Head Motif on Greek Coins and Its Relation to Classical Art* (New York, 1979), pp. 181-87, 241-43.

the facing-head issues of his group 7 into 19 series (*Reihen*) designated by letters of the alphabet from A (the oldest) to R (the most recent) with the letter J omitted and the letters M and N supplemented by M 1 and N 1.²⁹ The grouping in series depends on an analysis of style for the most part, and in the course of his discussion Herrmann forthrightly declared the difficulties and the limitations of his method of classification.³⁰ The assumption that die cutters at Larissa became worse rather than better at imitating the complex representation of Arethusa as they acquired more experience with the passage of time apparently bothered Herrmann, and he admitted that "auch braucht die Stilverschlechterung nicht immer spätere Zeit anzudeuten, sondern mag hie und da auch als Arbeit geringer Hände zu erklären sein, die gleichzeitig mit dem Meister arbeiteten. Meine Endziffern sind also oft vollkommen hypothetisch."³¹ He also expressed reservations about the relative chronology of all the facing-head issues outside the so-called "schöner Stil" series, that is, all the issues outside series A through I. In fact, Herrmann stated that his theory of a deterioration in style as a guide to chronology could not be easily applied to series K through R and that the alphabetic order of these groups did not necessarily represent a well-established relative chronology.³² On the basis of work by K. Regling, Herrmann dated series A through I to ca. 395–370 B.C., series K through M 1 to ca. 370–363 B.C., series N through Q to ca. 361–353 B.C., and series R to 353–344/3 B.C.³³

²⁹ Herrmann, pp. 41–49.

³⁰ Herrmann, pp. 49–59.

³¹ Herrmann, p. 50.

³² Herrmann, pp. 53–54. I have tried to provide a sufficient number of illustrations, but for the discussion which follows some readers may prefer to use the plates in Herrmann's article. Since his series are not indicated on the plates, I append for the readers' convenience a list of the examples of Herrmann's series as they are arranged on plates 5–8 in *Z/N* 35 (1924–25). Series A is represented by pl. 5, nos. 1–14; B by 5, nos. 15–19 and by 6, nos. 1–3; C by 6, nos. 4–6; D by 6, nos. 7–9; E by 6, no. 10; F by 6, nos. 11–13; G by 6, no. 14; H by 6, no. 15; I by 6, nos. 16–19; K by 7, nos. 1–3; L by 7, nos. 4–5; M by 7, nos. 6–8; M 1 by 7, nos. 9–10; N by 7, no. 12; N 1 by 7, no. 13; O by 7, nos. 14–17, and by 8, nos. 1–2; P by 8, no. 3; Q by 8, nos. 4–8; R by 8, nos. 9–16.

³³ Regling's arguments are quoted by Herrmann, pp. 59–63.

Herrmann's own words sufficiently demonstrate that his arrangement of the facing-head issues is too insecurely based to stand against the evidence from hoards that has already been surveyed. In the tradition of Barclay Head's canon developed for the coinage of Syracuse that a worse style meant a more recent date, Herrmann evidently found it natural to organize his chronological scheme on the basis of a gradually developing "Stilverschlechterung."³⁴ There is, however, no need to assume any necessarily progressive evolution of style, for the worse or for the better, in the issues of a large and productive mint like that of Larissa. One might compare the style of the female head found on Roman Republican denarii, whose dates are approximately known. The style of this head is not a reliable guide to the relative chronology of the denarii.

Nevertheless, of necessity Herrmann based his chronology on considerations of style. It was obviously difficult to establish absolute dates for his series, but the dates about which Herrmann felt the most confidence were those of his series R, the final fourth-century issues of the mint of Larissa in his opinion. Since these coins bore the name of a man whom Herrmann took to be tyrant of Larissa from 353 to 344/3 B.C. as a minion of Philip II of Macedon, he could peg series R to that period and then align all the other alphabetical series to run backwards in time toward the fifth century.³⁵ Since Herrmann's chronology depends on his dates for series R, it is important to make clear the nature of the evidence on which those dates are based.

Herrmann derived his absolute dates for series R from G. F. Hill's interpretation of the tiny inscription ΣΙΜΟ which appears on these coins.³⁶ In brief, Hill's argument is that Simos, while serving as Philip's tyrant in Larissa, placed his own name on the city's coins during the period between Philip's intervention in Thessaly on the side of Larissa against Pherae in 353 B.C. and Philip's reorganization of the Thessalian tetrarchies in 344/3 B.C.³⁷ The historical evidence used to link the coins

³⁴ On Head's canon, see C. H. V. Sutherland, *ANSMN* 4 (1950), p. 1.

³⁵ Herrmann, pp. 58–59.

³⁶ *Historical Greek Coins* (London, 1906), pp. 93–97. Kraay, *ACGC*, p. 119, refers to the Simos issues as a "fixed point" based on Hill's arguments.

³⁷ Diod. Sic. 16.35, 38 (intervention); Dem. 9.26 (tetrarchies). For detailed discussion of the intervention, see N. G. L. Hammond and G. T. Griffith, *A History*

of series R with this period, however, is tenuous. Above all, it is clear that Philip exploited the situation in Thessaly to his own advantage by maintaining a façade of constitutional normalcy as far as possible. For example, he led the Thessalians not in his capacity as the Macedonian king but as the chosen leader of the Thessalian confederacy, a post he secured in the late 350s B.C.³⁸ Since this leader customarily issued no coins under his own name nor did he interfere in civic coinage, it is very unlikely that Philip himself made any changes in the traditional coinages of Thessaly or that he encouraged others to do so.³⁹ Furthermore, Philip seems to have avoided overt interference in the traditional forms of civic government in Thessaly for the most part in order to make propagandistic use of an official policy of preserving or restoring the "ancestral constitution" of Thessaly.⁴⁰ Tyrants in the cities were not part of that policy, and Philip consistently intervened in Thessaly to expel tyrants, not to install them.⁴¹ The position adopted by Herrmann which dates the coins of series R on the assumption that the inscription "Simo" refers to Philip's tyrant in Larissa is untenable.

of Macedonia. Vol. II. 550–336 B.C. (Oxford, 1979), pp. 267–81 (Griffith); T. R. Martin, "Diodorus on Philip II and Thessaly in the 350s B.C.," *ClassPhil* 76 (1981), pp. 188–201. On the tetrarchies, see Griffith, pp. 528–34.

³⁸ For Philip's leadership of this confederacy, see Griffith (above, n. 37), pp. 220–23; Marta Sordi, *La lega tessala fino ad Alessandro Magno* (Rome, 1958), pp. 249–60.

³⁹ The only leader of the confederacy to issue coins with his name inscribed on them was the tyrannical Alexander of Pherae, whose leadership was contested by the members of the confederacy because of its revolutionary character. See Sordi (above, n. 38), pp. 193–234 on Alexander and pp. 334–39 on the normal functions and privileges of the leader of the confederacy (the *lagos* or *archon*).

⁴⁰ Philip's reorganization of Thessalian federal government meant that he could forge effective control of the cities without subverting their traditional civic governments. On Philip's ostensible respect for Thessalian tradition, cf. Griffith (above, n. 37), p. 534; J. R. Ellis, *Philip II and Macedonian Imperialism* (London, 1976), p. 140. If, as Ellis, pp. 141–42, 238, and M. Sordi, "La dracma di Aleuas e l'origine di un tipo monetario di Alessandro Magno," *AJN* 3 (1956), p. 20, suggest, the Thessalian confederacy under Philip issued a federal bronze coinage, there was a federal silver coinage of the fifth century as a precedent. For this latter coinage, see Peter Franke, "ΦΕΘΑΛΟΙ—ΦΕΤΑΛΟΙ—ΠΕΤΘΑΛΟΙ—ΘΕΣΣΑΛΟΙ. Zur Geschichte Thessaliens im 5. Jahrhundert v. Chr.," *AA* 85 (1970), pp. 85–93.

⁴¹ Diod. Sic. 16.14.1–2, 35, 38, 69.8.

The matter does not end here, however, because subsequent attempts to maintain the chronological connection between series R and a career for Simos in the 350s and 340s B.C. have taken another direction. The consensus is that at some point after the entry of Philip into Thessalian affairs in the 350s, Simos became tyrant of Larissa without the help of Philip and indeed contrary to his wishes. Philip therefore intervened in 344 B.C. to expel Simos and his fellow Aleuads from Larissa, thus putting an end to series R.⁴² The evidence used to support this reconstruction is, as in the previous case, insufficient. The clearest piece of evidence is Demosthenes' brief reference to a Eudikos and Simos of Larissa who were called friends of Philip until they had put Thessaly into Philip's hands.⁴³ The implication seems to be that Simos along with the other collaborators mentioned in the same passage suffered exile as the penalty for Philip's lost favor, but the chronology is not specified.⁴⁴ The rest of the evidence is either too vague to be of help or completely worthless.⁴⁵

⁴² See Griffith (above, n. 37), pp. 525–26; Ellis (above, n. 40), pp. 137–38; Helmut Berve, *Die Tyrannis bei den Griechen* (Darmstadt, 1967), pp. 295, 672; Sordi (above, n. 38), pp. 286, 364–68; H. D. Westlake, *Thessaly in the Fourth Century B.C.* (London, 1935), pp. 190–91.

⁴³ *De Cor.* 48.

⁴⁴ In any case, Demosthenes cannot be trusted implicitly in such assertions about the fate of collaborators. For example, Aristatos of Sicyon and Perilaos of Megara, who are named as exiles after the list in which Simos appears, reappear later in the same oration in a list which names traitors who gave away the freedom of their cities first to Philip and now to Alexander (*De Cor.* 295–96). One might also notice Euthykrate of Olynthos, another friend of Philip, who Demosthenes says “came to the worst ruin of all” after betraying his city to the king (*Dem.* 8.40). Hypereides reports that the same man was alive and apparently influential even after 338 B.C. (*frag.* 76 OCT = *frag.* B 19.1, *LCL Minor Attic Orators*, vol. 2).

⁴⁵ Harpokration, s. v. “Σίμος,” says only that Simos was an Aleuad who seemed to have cooperated with Philip. Aristotle at *Pol.* 1306a25–30 refers to a Simos in describing an incident at Larissa in which an oligarchic government was made into a tyranny, but his description is so compressed that it is very uncertain what role this Simos played. The date of the incident is in any case unknown. Diod. Sic. 16.69.8 succinctly reports that in 344/3 B.C. Philip “expelled the tyrants from the cities” in Thessaly, but the cities are not named. Pherae was certainly one, but Pagasae is more likely than Larissa to have been another. Polyae. 4.2.11 does not indicate that Philip expelled the Aleuads from Larissa because, according to this story, the Aleuads forestalled any action to undermine their position. This passage

It is possible to summarize as follows the historical evidence which bears on Simos and the coins of series R. A certain Simos, a noble of Larissa, was involved in the summoning of Philip to Thessaly in the 350s B.C. for help against the tyrants of Pherae. At some point after he and a confederate, in the words of Demosthenes, "had put Thessaly into Philip's hands," Simos lost the special favor of the Macedonian king. We do not know when the loss occurred or with what specific consequences for Simos. For example, if in this context Demosthenes meant by "putting Thessaly into Philip's hands" the reorganization of the Thessalian tetrarchies in (it seems) 344 B.C.,⁴⁶ a plan which Simos could have helped Philip to devise, the loss of favor could have meant only that Philip betrayed Simos' hopes by failing to make him one of the tetrarchs and not that Simos was driven from Larissa.⁴⁷ In sum, it is certain that Simos cannot have been Philip's tyrant at Larissa from 353 to 344/3 B.C., as Herrmann believed, and if he ever exercised tyrannical power in this period, it would have been in 345–344 B.C. for only as long a time as it took Philip to return to Thessaly and unseat him.⁴⁸

By now it should be clear that the historical evidence used to date the coins of series R to the period 353–344/3 B.C. is largely a mirage, changing its appearance or even completely fading away in substance depending on the point of view of the interpreter. The consequences of the unsatisfactory nature of the historical evidence are obvious. There is no choice but to look above all at the evidence of the coins themselves in any attempt to give a date to series R and to the other series of the facing-head coinage of Larissa.

is evidence only for tension between the king and his collaborators, nothing more. Finally, the scholia to Dem. 1.22 and 2.14 are worthless because they confuse the Aleuads of Larissa with the tyrants of Pherae.

⁴⁶ Griffith (above, n. 37), pp. 528–35.

⁴⁷ The names of only two tetrarchs are attested, but neither is Simos: Theopomp. *FGrH* 115 frag. 209; *SIG*³ 274, no. 8; Ellis (above, n. 40), pp. 141, 276, n. 64.

⁴⁸ This is essentially the view of Westlake (above, n. 42) and Ellis (above, n. 40), and the date is established as follows. The stasis described by Aristotle occurred in peacetime (*Pol.* 1306a26), therefore after the peace of 346 B.C. The best time for Simos to have become tyrant against Philip's wishes was while the king was away fighting the Illyrians in 345 B.C. (Isoc. *epist.* 2.3; G. L. Cawkwell, *Classical Quarterly* 13 [Oxford, 1963], pp. 126–27). Philip intervened in 344 B.C. (Diod. Sic. 16.69.8).

NUMISMATIC EVIDENCE FOR A NEW CHRONOLOGY

RELATIVE CHRONOLOGY

According to Herrmann, series R and its neighbor, series Q, are the most recent issues of the mint at Larissa, dated ca. 361–344/3 B.C. A glance at their obverses and reverses shows why Herrmann put these coins together (Plate 1, 9 = R, 10 = Q). On the obverse, one sees a rather elongated version of the female facing head ultimately derived from Kimon's head of Arethusa on the coins of Syracuse. On the reverse, the horse in series Q and most of R grazes with all four legs extended instead of crouching in the position which G. F. Hill described as "about to lie down" which is so common on the other series at Larissa.⁴⁹ This grazing horse is replaced by a prancing horse on some specimens of R.⁵⁰ As for the legend on the reverse, R regularly has ΛAPI , which also occurs in Q along with $\Lambda\text{API}\Sigma\text{AI}$. Particularly noteworthy in these series are several details in the treatment of the obverse type. First, all the examples assigned by Herrmann to Q exhibit a scalloped or indented neckline on the female head.⁵¹ This particular refinement otherwise appears on a facing-head coinage, oddly enough, only on the Arethusa-type imitations from Carthaginian Motya around the very early years of the fourth century B.C.⁵² Second, in Q certainly, and perhaps in R as well, the nymph is wearing a chlamys fastened by a

⁴⁹ NC 1923, p. 220.

⁵⁰ Herrmann, p. 48, lists two examples. He says he cannot decide whether specimen alpha is genuine, not having seen it in person, because its reverse resembles a forgery by Christodoulos. The reverse of specimen beta is described as "wohl derselbe Stempel," but he expresses no doubt about its authenticity. This coin he had seen personally in the Berlin collection on which he worked for this article on the coinage of Larissa (p. 2). See below, n. 87.

⁵¹ Herrmann, p. 47.

⁵² On the facing-head issues of Motya, see G. K. Jenkins, "Coins of Punic Sicily," *SNR* 1971, p. 31, and Erhart (above, n. 28), pp. 233–34. Erhart suggests in n. 481 that this indented neckline may be Punic in origin. It also appears on the profile heads of some fifth-century Syracusan issues, e.g. Kurt Regling, *Die griechischen Münzen der Sammlung Warren* (Berlin, 1906), nos. 331–33.

button or similar clasp at the base of her neck.⁵³ Like the scalloped neckline, the chlamys is not characteristic of Kimon's Arethusa but rather appears on fourth-century facing-head issues from western Asia Minor which carry a representation of Apollo.⁵⁴ Third, all the issues of Q and all but one of R lack the necklace characteristic of other facing-head series at Larissa (except P), and the earrings common in other series are generally absent as well.⁵⁵ Finally, series Q exhibits one additional oddity. Some specimens from this series have dolphins alongside the facing head on the obverse, which otherwise appear nowhere else in the facing-head coinage of Larissa.⁵⁶ The dolphins presumably reflect the influence of the dolphins to be seen sporting in the hair of Arethusa as depicted by Kimon, but on these coins of Larissa, as on the facing-head issues of Motya, the dolphins are placed around the nymph's hair rather than in it.⁵⁷

In sum, the issues of R share a number of the characteristics which serve to distinguish series Q from the other series in Herrmann's classification. Therefore, his decision to place these series together seems reasonable based on their overall similarities, although, as I see it, the two series are probably not exactly contiguous.⁵⁸ But we can no longer accept Herrmann's chronology which makes these series the last silver coins of Larissa because that position belongs to the type found in *IGCH* 168. Furthermore, the grounds on which Herrmann based his

⁵³ The chlamys is clearly visible in Herrmann's illustrations of Q. On nos. 11 and 12 of Herrmann's pl. 8 from series R, there is a bulge along the neckline that might be the fold of a chlamys, but the spot where the button or clasp should appear is off the flan on both these coins. Herrmann recognized this bulge but wrongly called it a necklace. See n. 55. If it should be proven from other examples of R that a chlamys does occur in this series, one should then consider moving R close to the start of the facing-head issues.

⁵⁴ See the issues of Klazomenai, Miletus and the satraps of Karia described by Erhart (above, n. 28), pp. 213–19.

⁵⁵ Herrmann, pp. 47–48, who failed to recognize the chlamys, erroneously described the fold of this garment fastened at the neck as a necklace on the coins of these series. Herrmann's series R, coin beta, is his only example with earrings in the series.

⁵⁶ Herrmann, pl. 8, 8, and Varoucha (above, n. 12), pl. 9, 6. See Plate 1, 1, for a reproduction of the latter specimen.

⁵⁷ Cf. Erhart (above, n. 28), p. 233.

⁵⁸ See the discussion which follows on the order of the series.

absolute dates for Series R are unreliable. The same observation applies to the chronology of series Q. Herrmann dated these coins to the period ca. 361–353 B.C. on the grounds that they were the series just before R, whose start he put in 353 B.C., but were later than the issue inscribed ΑΛΕΥ (Herrmann's group 8), which he dated to the period ca. 363–361 B.C.⁵⁹ But just as 353 B.C. has no claim to authoritative status as a chronological fixed point, neither does 361 B.C. because no compelling stylistic or hoard evidence can be marshalled to date these coins. First, the obverse and reverse types of this "Aleuas issue" are so markedly different from those of the other facing-head issues that it makes little sense to attempt to date the issue closely on the basis of style (Plate 1, 11).⁶⁰ Second, the hoards are of no help because no examples of this issue are on record from any hoard. In the absence of any relatively objective criteria for dating, scholars are forced to rely on interpretations of the types and legend of the issue as the basis for their chronological suggestions. In this way Herrmann arrived at his date of ca. 363–361 B.C.⁶¹ In the same manner, Marta Sordi has subsequently argued that the Aleuas issue belongs considerably later in the century at the start of the reign of Alexander the Great, probably in 336 B.C.⁶² Sordi's arguments are intricate and exhaustive, but when two such different chronological conclusions can be drawn from the same evidence, it is necessary to admit that we cannot in truth date these coins with any confidence. Since the Aleuas issue is not precisely dated, it cannot safely be used as a chronological peg from which to hang other facing-head issues. In other words, Herrmann's date of ca. 361 B.C.

⁵⁹ Herrmann, pp. 60, 63–66.

⁶⁰ Obv. ΑΛΕΥ, male helmeted head facing l., double ax; rev. ΛΑΡΙΣΑΙΑ ΕΛΛΑ eagle on lightning bolt l.

⁶¹ Herrmann, pp. 64–66. His most substantive argument rests on his interpretation of the legend ΛΑΡΙΣΑΙΑ as contemporary with the similar adjectival legends on the coins of Alexander of Pherae, but this legend appears on several other issues of Larissa, some of which Herrmann dates as early as the fifth century, e.g. groups 3 D, E, F and G (Herrmann, pp. 21–22). It is obvious that this criterion is ambiguous at best in this case. For the view that the coin was issued by Jason of Pherae, see H. T. Wade-Gery, "Jason of Pherae and Aleuas the Red," *JHS* 44 (1924), pp. 63–64, with references to earlier attributions by various scholars.

⁶² "La dracma di Aleuas e l'origine di un tipo monetario di Alessandro Magno," *Attn* 3 (1956), pp. 9–22.

as the upper terminus of series Q is just as unsubstantiated as is his lower terminus of 353 B.C. We are free to place Herrmann's final series, Q and R, wherever they appear to belong based on the numismatic evidence.

The record of the various types of the facing-head issues as they occur in hoards helps to provide a rough guide to the relative chronology of these coins. In the latest hoards to contain coins of Larissa, instead of specimens from Herrmann's final series Q or R, there are only examples which he would put earlier than these series.⁶³ In fact, with the exception of four well-worn didrachms in *IGCH* 162, all the coins of Larissa in the hoards of the third and second centuries B.C. whose contents have been adequately described are the same type.⁶⁴ These drachms carry on the obverse the familiar female facing head turned slightly to the left and on the reverse a horse to the right in an odd crouching position with bent legs.⁶⁵ The reverse legend is uniformly the genitive plural ethnic, ΛΑΡΙΣΑΙΩΝ, with part of the word inscribed above the horse and part below in the exergue (Plate 1, 2–4). This is of course exactly the type found in *IGCH* 168 which Bellinger identified as the final issue of the mint of Larissa. Under Herrmann's classification, the didrachms of *IGCH* 162 belong to series A and *IGCH* 168 type drachms belong to A or M. One must say A or M because the drachms of these two series are, in my opinion, too similar to represent different series. Herrmann's explanation as to why the coins of A and M should constitute two series appears to rest above all on the assumption that the coins of M do not achieve the "beautiful style" of the coins of A, although he does claim that the facing head of A always has earrings but that of M does not and that the nymph's lips are more closely pressed together in M.⁶⁶ Herrmann's judgment on the style and lips of M seems to me subjective, and, to judge from Herrmann's own plates, earrings

⁶³ I should reiterate that my discussion of the hoard evidence depends on currently published information.

⁶⁴ *IGCH* 168 (Thessaly, ca. 250–240); *CH* 3, no. 43 (2, no. 72, Thessaly, ca. 229–228); *IGCH* 232 (Euboea, ca. 171–169).

⁶⁵ The one drachm of Larissa in *IGCH* 162 (Thessaly, ca. 250) is described only as "of the fourth century," but it seems very unlikely that this coin is not the same type as the other drachms in late hoards.

⁶⁶ Herrmann, pp. 41, 45, 55.

are not always visible on the coins of A. (See, for example, Herrmann's pl. 5, 12, from series A, and his pl. 7, 8, from series M.) I will therefore treat the coins of A and M as one series, to be called A-M. The subgroup of A-M found in *IGCH* 168 which has the nymph three-quarters left and the horse right will be called A-M 168.

If one proceeds backwards in time in terms of the dates of the hoards in which coins of Larissa appear whose types can be determined, the next relevant hoards are six which belong to the 330s and 320s B.C. The types in these hoards support the claim of A-M 168 to the status of the final issue of the mint of Larissa. In two of these hoards there is only a single drachm of Larissa, in both cases an A-M 168 type.⁶⁷ The only hoard in this group with a large number of Larissa drachms is *IGCH* 385 with A-M and A-M 168 types as 58 of its 62 specimens from this city. As mentioned earlier, the other drachms belong to series C, E or F (one specimen), B (one) and group 6 (two).⁶⁸ Herrmann placed group 6 at the beginning of the fourth century.⁶⁹ Two other hoards in this period have two drachms of Larissa in each, an A-M and a "K or Q" type in one hoard and one D and one E type in the other.⁷⁰ We are now beginning to encounter types other than A-M 168, but unfortunately it is not possible at this time to report on the condition of the great majority of these coins. The situation improves somewhat in the sixth hoard of this group, *IGCH* 386.⁷¹ This is the hoard that has two drachms from one of Herrmann's series K to M 1 which are described as "très bien" in condition, an E type in "bien," and a Q type whose condition is not rated but which appears to be more worn than the E coin in the published photographs.⁷²

⁶⁷ *IGCH* 76 (Messenia, ca. 327); *CH* 2, no. 52 (6, no. 20, Thessaly, ca. 323-320).

⁶⁸ See n. 11.

⁶⁹ Herrmann, p. 40.

⁷⁰ *CH* 1, no. 37, in Le Rider, pp. 290-92, hd. 5, Macedonia, ca. 337/6, and pp. 292-93, hd. 6, in commerce, ca. 337/6. The date of these hoards is derived from the coins of Philip of Le Rider's group Pella 2 A 2 of ca. 342/1-ca. 337/6 B.C. The identifications of the Larissa drachms are Le Rider's.

⁷¹ See n. 12.

⁷² Varoucha (above, n. 12), p. 418, pl. 9, 5 (E) and 6 (Q). Since the two drachms of K to M 1 are not illustrated, it is impossible to determine their precise series. I suspect it is M, i.e. A-M.

The next hoards in this survey provide limited but useful information. One worn didrachm, the denomination Herrmann places with series A, appears in at least one hoard of ca. 348 B.C., and several more are perhaps included in a contemporary hoard.⁷³ Another small hoard of approximately the same date contains at least one drachm of Herrmann's fifth-century group 3 D.⁷⁴ The final hoards to be treated are those regarded as the earliest ones on record as containing coins of Larissa. Both are large hoards whose contents can only be partially described at present, but their evidence is valuable.⁷⁵ Both hoards come from Thessaly, and neither contains any Macedonian regnal coinage. This absence of the coinage of the Macedonian kings is not a very precise chronological indication because no Macedonian coins appear in Thessalian hoards until the reign of Alexander.⁷⁶ Since the other Greek coinages in these hoards are not easily dated themselves, the mid-fourth-century date given these two hoards in *IGCH* must be regarded as tentative. Their date could be later in the century. In any case, both hoards exhibit a mixture of Larissa types in which A-M 168 appears to be the most numerous and, as a group, the least worn.⁷⁷

⁷³ *IGCH* 371 (Macedonia, ca. 348) with one; *IGCH* 56 (Thessaly, ca. 350) with one or two (?). The contents and the date of the latter hoard are uncertain. The date for *IGCH* 371 rests on the presence of coins of the Chalkidian League and the absence of any coins of Philip II. See n. 100.

⁷⁴ *IGCH* 55 (Thessaly, ca. 350?).

⁷⁵ *IGCH* 52 (Larissa environs, before 350); 58 (Atrax, ca. 350). The latter hoard's contents are supplemented by *CH* 4, no. 21, and 5, no. 20.

⁷⁶ As the record stands now, the first Thessalian hoards to contain Macedonian regnal coins are *IGCH* 80, *CH* 2, no. 51 and *CH* 2, no. 52 (*CH* 6, no. 20). All of these hoards contain coins of both Philip II and Alexander III, and their dates are ca. 323–320 B.C.

⁷⁷ The following list identifies the types, as closely as can be determined from photographs, of all the coins that are illustrated in the publications of *IGCH* 52 and 58 according to Herrmann's classification as modified to include A-M and A-M 168 as separate categories.

IGCH 52 in *ADelt* 19 (1964), pt. 2, 1 *chronika*, pl. 1: 13 = group 4; 14–16 = F; 17 = A-M 168; 18 = A-M; 19 = N 1, Q or R; 20 = O or R. Hirsch 34, 21–22 Feb. 1963: 1187–89 = group 3H; 1190 = A (didrachm); 1191–95 = A-M 168; 1196 = A-M; 1197–98 = E; 1199 = O?; 1200 = D. Hirsch 35, 25–28 June 1963: 341–44 = A-M 168; 345–46 = E; 347 = F; 348 = O; 349–50 = O, Q or R; 351 = B.

IGCH 58 in *ArchAnAth* 2 (1969), pp. 106–7, figs. 1–2: 1 = group 6; 2–7, 9 =

The facing-head coins which consistently show signs of considerable wear are those belonging to Herrmann's series M 1, N, N 1, O, P, Q and R.⁷⁸ This evidence agrees with that of the other hoards surveyed and provides the basis for a realignment of the facing-head series. In this realignment, the earliest issues will be Q, one of those which Herrmann made the latest, and the latest issue will be A-M 168, a particular variety of two series, A and M, which, in my opinion, are in fact the same. Unfortunately the evidence of the hoards does not indicate precisely how to arrange the other series.

The most distinctive of the facing-head series is Q because it is the only one to have dolphins around the nymph's head on some examples (Plate 1, 1). Since these dolphins recall those of the late fifth-century Arethusa type of Syracuse on which the Larissa imitation is based, it makes sense to think that this particular detail was copied at Larissa on the mint's early copies of the prototype and was then omitted from later dies, perhaps because dolphins were an inappropriate accompaniment for the nymph who represented a landlocked city such as Larissa. These dolphins could mean that Q is at the beginning of Larissa's facing-head issues.⁷⁹

Other indications help to confirm this view. First, the indented or scalloped neckline of the nymph on the coins of Q recalls the same detail on fifth-century issues of Syracuse with a profile head and facing-head issues of Motya from ca. 400 B.C.⁸⁰ Second, since the chlamys which the

A-M 168; 8, 10-12 = A-M; 13 = C; 14 = F; 15 = B; 16 = G; 17 = H; 18-19 = L; 20 = O or P; 21 = N; 22 = O; 23 = M 1, N, O or P; 24 = R.

⁷⁸ Notice, for example, in *IGCH* 52, Hirsch 35, nos. 348-50; in *IGCH* 58, *ArchAn-Ath*, fig. 2, nos. 23-24.

⁷⁹ An analogous situation exists in the appearance of a solitary dolphin beside the female facing head modeled after Arethusa which occurs on the coinage of the satrap Pharnabazos minted at Tarsos. The dolphin appears on what (to judge from the style) is perhaps the earliest issue of this type but then disappears on later issues of Pharnabazos and continues to be missing on the similar coins of Datames from the same mint. For these coins, see *SN GvAulock* 5916-24 (Pharnabazos) and 5934-42 (Datames). No. 5916 definitely has a dolphin. From the photographs, it is not possible to determine whether 5917-18 also have a dolphin or just a die break in the same area. On the imitation of the Syracusan Arethusa at Tarsos, see *ACGC*, pp. 118-19, 281-82.

⁸⁰ See n. 52.

nymph wears in Q and P, but not in later series, was a characteristically Thessalian garment which seems to be very rare in depictions of women and was therefore likely to attract notice, it could be explained as a detail introduced on early issues to emphasize that the lady was indeed Thessalian despite her resemblance to the Syracusan nymph and occasional representation in company with very un-Thessalian dolphins.⁸¹ Once the nymph was familiar in her new facing-head pose, this rather mannish attribute could be dropped.

As for the reverse, it too is comfortable at the beginning of these issues because the straight-legged grazing horse resembles the horse on the obverse of the coins which Herrmann makes the very earliest issues of Larissa at the start of the fifth century.⁸² More importantly, the legends which appear on coins of Q are those of the undeniably earlier issues of Larissa in Herrmann's groups 1–3 rather than the genitive plural ethnic spelled with omega of the issues like A-M 168 which belong at the end of the coinage of Larissa.⁸³ Some specimens have ΛΑΠΙ

⁸¹ Others beside Thessalians of course wore the chlamys, but the garment's nickname ("Thessalian wings") attests its particular association with Thessaly. The chlamys is worn by the youths who appear on fifth-century coins of Larissa as participants in the Thessalian sport of bull-leaping (e.g., Herrmann, pl. 3, 16–23). On bull-leaping, see *RE*, Ser. 2, 9, s.v. "ταυροχαθάρια," cols. 24–27 (Ziehen). The chlamys was a male garment only rarely shown on female figures in art. See *RE* 6, s.v. "χλαμύς," cols. 2343–45 (Amelung); *DarSag* 1, s.v. "chlamys," pp. 1114–16; Margarete Bieber, *Griechische Kleidung* (Berlin, 1928), pp. 22–24.

⁸² Herrmann, p. 3, group 1, pl. 1, 1–3.

⁸³ The appearance in *IGCH* 52 and 55 as well as in the excavations at Olynthos of worn specimens of group 3 confirms the early date of these coins. For *IGCH* 52, see n. 77; for *IGCH* 55, see *BCH* 84 (1960), pl. 7, 2; for Olynthos, see David M. Robinson and Paul M. Clement, *Excavations at Olynthos*, pt. 9 (Baltimore, 1938), p. 242, pl. 32, 14.

Herrmann's groups 1 and 3 have ΛΑΠΙΣΑΙΟΝ as one of their legends, but this form of the genitive plural ethnic is distinguished from the later form by the use of omicron instead of omega. The legend in group 6, which Herrmann dates to the start of the fourth century, is reported to be ΛΑΠΙΣΑΙΩΝ, but none of the examples I have seen has the inscription sufficiently well preserved to show whether omega is in fact used. The spacing of the letters in the legend of group 6 is so close that omicron would appear to fit better than the wider letter omega. See Herrmann, pl. 4, 17–18; *BMCThessaly*, pl. 5, 13; *ArchAnAth* 2 (1969), p. 106, fig. 1, 1. It may be relevant that the local script of Thessaly, which did not have omega, continued

as their legend, thereby recalling groups 1, 2 and 3.⁸⁴ Those with $\Lambda\text{API}\Sigma\text{AI}$ recall group 3.⁸⁵ On the basis of these characteristics of the coins of Q in combination with the evidence of the hoards (e.g., a worn specimen in *IGCH* 386; several worn specimens in *IGCH* 52 which are Q or related series), I would make series Q the first of the facing-head issues of Larissa. The coins of Q which have dolphins on the obverse are probably the first of this series.

Like those of Q, the coins of series M 1, N, N 1, O, P and R are over-all the most worn of the facing-head issues in the hoards.⁸⁶ It is therefore probable that these series also belong at the early end of the facing-head issues. Unfortunately, the evidence of the hoards is not sufficient to demonstrate the order in which these series should be placed. I can only suggest that the types of P may be likely candidates for placement in a very early series because they closely repeat characteristics already familiar from Q, in particular the scalloped neckline with a chlamys on the obverse and a straight-legged horse on the reverse with the legend $\Lambda\text{API}\Sigma\text{AI}$ (Plate 1, 12). Moreover, the elongated facing head with straggling hair beside the neck seen in P resembles the distinctive style of the nymph in Q. At the present time it is only possible to say that series M 1, N, N 1, O and P, in an unknown order, represent as a whole the early series of the facing-head issues after series Q. The evidence will not yet allow a more precise alignment. Fortunately, there is one piece of evidence which provides a basis for placing this group of series in relation to the remaining series. An obverse die link connects series R to series K.⁸⁷ In conjunction with the hoard evidence, this link

to be used until at least the later part of the fifth century in inscriptions. See L. H. Jeffrey, *The Local Scripts of Archaic Greece* (Oxford, 1961), p. 98.

⁸⁴ The coins with the legend ΛAPI which Herrmann, p. 36, calls group 4b do not in fact belong to group 4, in my opinion. See n. 90.

⁸⁵ ΛAPI and $\Lambda\text{API}\Sigma\text{AI}$ may both be shortened forms of the early legend $\Lambda\text{API}\Sigma\text{AIA}$ found spelled out in groups 3 and 4.

⁸⁶ Of course, an occasional specimen from these series can survive in an excellent state of preservation. The coin of O or R shown in *ADelt* 19 (1964), pt. 2, 1, *chronika*, pl. 1, 20, is said to be FIDC (p. 9).

⁸⁷ Herrmann, p. 45, coin K gamma, p. 48, coin R beta. It must be pointed out that the reverse of coin R beta bears a resemblance to the reverse of a coin whose authenticity worried Herrmann (see n. 50). However, since there is no reason to doubt the authenticity of coin K gamma and Herrmann personally examined coin R beta in

furnishes important confirmation of the relative chronology of the earlier series already described and the later series such as K which are distinguished in part by the horse with bent legs on the reverse. K in turn is associated with I by the general appearance of the obverse and reverse types as well as the inscription $\text{I}\Delta$ or ΔI found in both these series.⁸⁸

The remaining series except for A and M again cannot be put into a secure chronological order as a result of the paucity of evidence. For the moment it will suffice to say that the individual series K and I, followed by B, C, D, E, F, G, H and L in an unknown order, represent the "middle" of the over-all series between the earlier series and the series A-M, a single group which can be placed with confidence at the end of the facing-head issues of Larissa. The hoard evidence for the placement of A-M is consistent, and the obverse and reverse types are appropriate as well for this chronology. The style of the head of the nymph has become standardized, with wavy hair that generally fills the space around the head more uniformly and completely than did the more straggly strands of some of the earlier heads. The horse has bent legs which give it a distinctive posture that is usually a deeper crouch than the similar posture seen on earlier series. The legend is the full genitive ethnic plural, $\Lambda\text{API}\Sigma\text{AI}\Omega\text{N}$, divided so as to fit above and below the horse (Plate 1, 2-4). Some of the A-M series coins have small symbols (plant, trident) below the belly of the horse, and it is possible that these coins may belong earlier rather than later in this group.⁸⁹ The final coins of A-M are those which I have called A-M 168, on which the head on the obverse is always three-quarters left and the horse on the reverse is always right.⁹⁰

Berlin, it is reasonable to believe that both coins are genuine and that the die link is a reliable and important piece of evidence.

⁸⁸ Herrmann, pp. 44-45, 54. I cannot agree with Herrmann's opinion, pp. 52-53, that a conspicuous break in the style of the obverse from "beautiful" to "not beautiful" occurs between I and K.

⁸⁹ Martin (above, n. 19), pp. 75-76.

⁹⁰ It should be pointed out that the unusual legend ΛAPI (above) $\Pi\Lambda\text{EI}$ (below) which appears in Herrmann's series A and in his profile-head group 4b (Herrmann, p. 36) does not constitute an argument for placing series A at the start of the facing-head issues and therefore closer in time to the earlier profile-head issues. This legend is reported for only one drachm in 4b; otherwise the coins in this group are triobols. But this drachm is in fact not a profile-head piece as reported by Herrmann but rather

So far, this discussion has concerned only the drachms of the facing-head coinage of Larissa, the denomination which served as the mint's largest denomination in almost all periods, in typical Thessalian fashion.⁹¹ Hoard evidence is largely lacking for smaller denominations, which must therefore be left out of consideration. It is possible, however, to say something about the one issue of didrachms known from Larissa. On these coins, the obverse type is the stylistically fully developed facing head three-quarters left, while the reverse features either a prancing horse wearing a bridle or collar, or the familiar crouching horse, both to the right (Plate 1, 13). The legend is the full genitive plural ethnic. Herrmann placed these didrachms with the "most beautiful" drachms of series A.⁹² I agree that these coins belong with the later rather than the earlier series of drachms, but it is difficult to determine exactly where this larger denomination belongs because the hoard evidence is of little help. Didrachms in worn condition are found in hoards both of the middle of the fourth and the middle of the third century B.C.⁹³ The fully developed head and the slightly crouching horse would be appropriate in series A-M, while the prancing horse type with legend distributed around the flan should be somewhat earlier. All one can say is that the didrachms, or at least some of them, should be earlier than the middle of the fourth century.

ABSOLUTE CHRONOLOGY

The didrachms provide an appropriate transition to the meager evidence available for the dates which should be assigned to the various

a standard facing-head type of series A. For the coin, see Mionnet, *Supplément*, vol. 3 (Paris, 1829), p. 293, 192. (A second example can be found in NC 1923, pp. 219–20, no. 14, pl. 9.) That the triobols assigned to 4b have a profile head does not mean that these coins must necessarily be early because these smaller denomination pieces could have been minted with an older obverse type even while contemporary drachms were showing a more modern type, the facing head. I suspect that 4b does not belong with 4a and 4c at all, a suspicion heightened by the differences in the style between the profile head of 4b and those of 4a and 4c.

⁹¹ For the coinage of Thessaly, see *ACGC*, pp. 115–20.

⁹² Herrmann, p. 51.

⁹³ *IGCH* 52 (before 350); 71 (ca. 350–325); 371 (ca. 348); 162 (ca. 250).

facing-head issues of Larissa. Pherae was apparently the only other Thessalian mint to issue didrachms.⁹⁴ Two types are known, one with a profile head and the other with a female facing head whose flowing locks of hair are vaguely reminiscent of Kimon's Arethusa.⁹⁵ A resemblance to the female facing head of the coins of Larissa is also discernible (Plate 1, 14). In the light of the appearance of the unusual denomination of didrachm with a facing head at both Larissa and Pherae and of the traditional rivalry between the two cities, it would be surprising if their facing-head didrachms were not roughly contemporary. Fortunately, at least an approximate date can be given to the facing-head didrachms of Pherae because they are inscribed with the name of Alexander, the nephew and successor of Jason of Pherae. Alexander ruled, it seems, from 369 to 358 B.C.⁹⁶ This was a period of increased military activity in Thessaly as Alexander tried to achieve dominance and the Aleuads at Larissa tried to block him.⁹⁷ Since cavalry was a national specialty in Thessaly and a cavalryman's pay at this time was most likely exactly one didrachm of the Aeginetan standard per day, the mints of Larissa and Pherae could have begun to issue didrachms as a convenient and attractive denomination to use in the competitive recruiting and payment of mounted troops.⁹⁸ This new mint practice may have begun with Alexander's predecessor at Pherae, and it has been suggested that the profile-head didrachms of Pherae belong to Jason's rule, which extended from ca. 385 to 370 B.C.⁹⁹ The change

⁹⁴ To judge from the varieties listed by Herrmann and in *BMCThessaly*.

⁹⁵ For these coins, see *ACGC*, p. 118, pl. 21, 387–88. The nymph is identified as Hypereia rather than Hekate by Erhart (above, n. 28), pp. 248–49.

⁹⁶ Westlake (above, n. 42), pp. 128–29, 156; Sordi (above, n. 38), pp. 193, 230. It is an interesting coincidence that one sees on coins of Perdikkas III from this same period a horse in the striking pose with right front and left rear legs raised (prancing or trotting) which also appears on some of the didrachms of Larissa. For Perdikkas' coins, see *ACGC*, p. 144, pl. 28, 508, to which compare pl. 21, 396, of Larissa. For the dates of Perdikkas' coins as 368–359 B.C., see Hammond (above, n. 37), p. 192.

⁹⁷ For the events of this period, see Westlake (above, n. 42), pp. 126–59; Sordi (above, n. 38), pp. 191–234.

⁹⁸ For the Thessalian emphasis on cavalry, see, for example, Westlake (above, n. 42), pp. 108–9. For the rate of pay, see Xen. *Hell.* 5.2.21.

⁹⁹ Kraay, *ACGC*, p. 118, suggests the coins are Jason's. For the dates, see Sordi (above, n. 38), pp. 156–61, 187. Jason built his power with substantial forces of cavalry, a number of whom were mercenaries. See Xen. *Hell.* 6.1.18–19, 4.28.

from profile to facing head on the didrachms of Pherae perhaps took place under the influence of the facing head on the coinage of Larissa because the latter city's mint, which had produced facing-head issues before the didrachms, clearly had this type before Pherae did. In fact, Pherae retained the profile head on its drachms throughout this period. Based on these observations, a date of ca. 370 B.C. would seem reasonable for the didrachms of Larissa, with a considerable margin of approximation clearly understood. This dating receives some support from the appearance previously noted of a worn didrachm in *IGCH* 371, a hoard which is plausibly dated ca. 348 B.C., and the report of some didrachms in *IGCH* 52, a hoard perhaps no later than 350 B.C.¹⁰⁰

The hoards are otherwise not very helpful at present with absolute chronology because we cannot yet establish precise dates for hoards with coins of Larissa which do not also include Macedonian regnal issues.¹⁰¹ It is not necessarily safe to date hoards such as *IGCH* 52, 55 and 58 to ca. 350 B.C. on the grounds that they do not include any coins of Philip II because his coins do not otherwise turn up in hoards in Thessaly until late in the 320s B.C.¹⁰² And the only Macedonian hoard to contain a coin of Larissa beside the hoards which also have coins of Philip is *IGCH* 371.

There is, however, some small help to be found in the reports of the excavations at Olynthos. Two silver coins of Larissa were found there, a worn trihemionbol of group 3a DE (i.e., earlier than the facing-head

¹⁰⁰ *IGCH* 371 consisted of at least four tetradrachms of the Chalkidian League and one didrachm of Larissa. It is usually assumed that the coinage of the Chalkidian League ceased in 348 B.C. when Philip captured and plundered the League's capital city and mint, Olynthos. See Robinson and Clement (above, n. 83), pp. 112, 133–34, 162–63. This view is supported by the hoard evidence. Chalkidian coinage appears in fifteen fourth-century hoards, but in only one of these are there any coins of Philip (*IGCH* 385 of ca. 337/6 B.C. with 136 tetradrachms of Philip and one Chalkidian tetradrachm). The other fourteen hoards are plausibly dated 348 B.C. or earlier. For these hoards, see the index of mints in *IGCH*, s.v. "Chalcidian League." For the date of *IGCH* 52, see n. 25.

¹⁰¹ Study of the Theban issues with magistrates' names may help to determine absolute dates for the hoards in which they occur. These issues appear to belong to the period ca. 371–338 B.C. See *ACGC*, pp. 113–14.

¹⁰² See n. 76.

issues) and a worn drachm that could be O, P, Q or R.¹⁰³ Twelve bronze coins of Larissa are also recorded from these excavations, and their types are of interest. Ten of these coins have the type of the triobols of group 4b, the profile head on the obverse and a crouching horse on the reverse. The legend appears to be the full genitive plural ethnic distributed above and below the horse rather than the peculiar legend of 4b.¹⁰⁴ Only two of these bronzes have facing heads on the obverse and in both cases the reverse is a horseman like that on the drachms of G and H and the obols Herrmann tentatively assigned to A and B together (while admitting they could belong with later series).¹⁰⁵

As a result of the scanty number of bronze coins of Larissa recorded in hoards, it is impossible to draw a certain correlation between the types of the facing-head silver and bronze issues, but it would be odd if there were not some connection. Therefore, the types of the bronze coins found at Olynthos at least confirm that the facing-head type was already in use by mid-century. However, they may also suggest that the production of the A-M types was not yet so common that it had been put on all small denominations. In general, the limited information from Olynthos confirms the other indications of chronology already surveyed, with perhaps the added hint that facing-head types were not yet so numerous in, say, the late 360s B.C. that they had migrated to Macedonia in large numbers.¹⁰⁶

¹⁰³ Robinson and Clement (above, n. 83), p. 242, pl. 32, 14; David M. Robinson, *Excavations at Olynthus*, pt. 3 (Baltimore, 1931), pp. 24–25, pl. 4, 62. Robinson, p. 25, refers to Herrmann's pl. 8, 4–8, which is series Q, but he says the coin belongs to "Group I," which is presumably an error for "Group VII," because the page reference to Herrmann is given as p. 49.

¹⁰⁴ Robinson, pt. 3 (above, n. 103), p. 96, pl. 19, 794; Robinson, *Excavations at Olynthus*, pt. 6 (Baltimore, 1934), pp. 83–84, pl. 18, 739–43; Robinson and Clement (above, n. 83), p. 243, no. 3 (four specimens), pl. 32, 16.

¹⁰⁵ Herrmann, p. 42.

¹⁰⁶ Robinson's statistics (above, nn. 103–4), pt. 3, pp. 4–5, and pt. 6, p. 1, show that the great majority of the coins found in the Olynthos excavations belong to the period before 348 B.C. It is of course impossible to tell how long before that date the coins of Larissa made their way to Olynthos. The only coins of Larissa found in a hoard at Olynthos are Robinson, pt. 6, 739–40, the 4b type in bronze. See Robinson and Clement (above, n. 83), pp. 191–93, hoard no. 1 Æ.

There are virtually no other criteria for the determination of absolute chronology. We have already seen that the name Simos in series R is not a reliable indicator of chronology for those coins. The same can be said of the other abbreviated names and solitary letters that occasionally appear on other facing-head issues from Larissa. The name NAYK occurs in Q, $\text{I}\Delta$ and ΔI in K, I , M and Ξ on the obols assigned to A and B, and $\Pi\Lambda\text{EI}$ in A.¹⁰⁷ Only the last is inscribed in large letters and in the exergue. Under the arrangement I have proposed for these issues, "Nauk" comes at the head of the series (although it is not on the very earliest specimens of Q, those with dolphins), the following names and letters (including "Simos") occur on issues which follow one another somewhat later in the series, and "Plei" comes last of all. With the exception of "Plei," these inscriptions come at points in the series where the coins exhibit perceptible changes in style or type, and it is not out of the question that the inscriptions refer to the mint officials or die makers involved in implementing these changes.

But how is one to explain the great disparity between the appearance of these diminutive letters in the field and that of the inscription "Plei" which is so large and displaces part of the normal ethnic legend in its position in the exergue? It is hard to believe that an artist could have aspired to such prominence on the civic coinage in the light of the local tradition in this matter. This distinctive and unique inscription perhaps reflects political circumstances of a special character. It is only a suggestion for thought, but the sort of episode described by Aristotle in which a special magistrate at the head of a military force whose job was to avert civil war actually became a tyrant would offer such special circumstances. When he seized power at Pherae, Alexander broke tradition by putting his name on Pherae's coins in large letters in place of the civic legend.¹⁰⁸ It is not out of the question that a tyrant in Larissa did the same for a brief period. This explanation cannot be proven,

¹⁰⁷ Herrmann, pp. 41-42, 44-45, 47.

¹⁰⁸ For Aristotle, see n. 45. $\Pi\Lambda\text{EI}$ could be the abbreviation for a name known in Thessaly such as Pleistarchos (*IG IX*, 2, no. 6, line 1; no. 24, line 5, from Hypata) or Pleistainos (*IG IX*, 2, no. 568, line 16, from Larissa). The archon appointed to settle factional strife would surely have had control of the mint as part of the necessary administration of the city's finances. Compare the comparable fourth-century situation at Pharsalos, Xen. *Hell.* 6.1.2, for which such power is specifically attested.

but it does have the virtue of suggesting why no names or letters occur on the very numerous examples of series A-M 168, which have only symbols as some sort of control mark. If the occurrence of "Plei" in the A-M series was associated with an episode of tyranny, the inscription of a name or even of letters from a name on coinage at Larissa would thereafter have been abandoned in order to avoid any association with the anti-traditional practices of a tyrant.¹⁰⁹

I have argued elsewhere that the silver coinages of Larissa came to an end not long after 321 B.C. as a result of economic devastation after a period of famine, war and destruction in Thessaly.¹¹⁰ It is unfortunately not possible to suggest a date for the beginning of the facing-head issues with equal confidence. Herrmann suggested ca. 395 B.C. because he put the didrachms first in the series and associated them with the victory of Larissa over Pharsalos in 395 B.C.¹¹¹ This hypothesis has no evidence to support it, and I think it more likely that the didrachms are not the earliest facing-head issue and that they are contemporary with the similar coins of Pherae. Too little is known about the events of Thessalian history in the fifth and early fourth centuries to settle upon a particular event as the catalyst for the change from the older types at Larissa to the facing head in imitation of Syracuse. And in

¹⁰⁹ Even if this explanation of ΠΛΕΙ is correct, it still does not help with chronology. The only possible hint is the report that Simos of Larissa was traveling around with the hetaira Neaira and came to Athens with her sometime before 374/3 B.C. See Dem. 59.24, 33, 108. If this is the Simos of Aristotle's story, he could have left Larissa as a result of the strife that led to the establishment of the tyrannical neutral archon. The date of the ΠΛΕΙ issues would then be ca. 375 B.C. This is only speculation, however.

¹¹⁰ "The End of Thessalian Civic Coinage in Silver: Macedonian Policy or Economic Reality?" *Proceedings of the 9th International Numismatic Congress, Bern, September 1979*. (Luxembourg, 1982), pp. 157-64. In brief, the evidence for economic devastation is, first, the extraordinary gifts of grain to Thessalian cities including Larissa attested by M. N. Tod, *A Selection of Greek Historical Inscriptions*, vol. 2 (Oxford, 1948), no. 196. These gifts show that the problems of the 320s B.C. imposed grave agricultural and therefore financial losses on Larissa. Second, the Lamian or Hellenic War was contested in Thessaly during 323-322 B.C., with a final struggle in 321 B.C. The Thessalians resisted the Macedonians to the bitter end with obvious consequences. See Diod. Sic. 18.12-13, 15-18, 38.

¹¹¹ Herrmann, p. 50.

fact, the change may have had nothing to do with political or military history. The impetus for the change to a facing head from a profile head like those of Herrmann's group 4 may have been entirely aesthetic. The facing-head motif in a three-quarter view was extremely popular as a coin type by the end of the fifth century, and the mint officials at Larissa may simply have decided to adopt the most up-to-date style for their production.¹¹² The Thessalians were proverbially wealthy, and at least some entertained pretensions to the latest canons of taste and fashion.¹¹³ The profile head, which had replaced the very local type showing the national sport of bull-leaping, was itself probably a response to current trends in numismatic art, and the facing head could well be explained in similar fashion.¹¹⁴ But we simply cannot tell on present evidence when the facing-head types began at Larissa.¹¹⁵

If the date suggested above for the didrachms is valid, I would say that the early and middle series should be placed roughly in the first quarter of the fourth century, while series A-M extends over the period ca. 375–320 B.C. It is of course quite possible that the early and middle series did extend further down into the century. That the number of series is large in a relatively shorter period of time in the earlier part of the century is not a decisive objection against this chronology because these series seem to have been greatly outnumbered by the coins of A-M in terms of the amount of coinage produced. There are more than enough coins of this latter series to cover the period assigned to them. In any case, this new chronology must remain tentative as a result of the nature of the evidence on which it rests. I hope, however, that it will be helpful to have outlined the objections to Herrmann's chronology

¹¹² See Erhart (above, n. 28), pp. 141–209, on the proliferation of this type in the last quarter of the fifth century.

¹¹³ For their wealth in the earlier part of the fourth century, see Isoc. 8.117. Simonides was only one of the poets who had worked for Thessalians (Pl. *Prt.* 339a), and the sophist Gorgias spent time in Thessaly, some of it in Larissa, it seems (Isoc. 15.155; Arist. *Pol.* 1275b26–31).

¹¹⁴ For the bull-leaping types, see Herrmann's groups 1–3. On the change to a profile head, see Herrmann, p. 37.

¹¹⁵ Kraay, *ACGC*, pp. 118–19, recalling the almost twenty-five year interval before the mint of Tarsos copied Kimon's Arethusa, points out that the change at Larissa need not have been made immediately after the appearance of the prototype.

and to have made a preliminary attempt at revising it. With further evidence, more secure progress may be possible in the future.¹¹⁶

KEY TO PLATE

1. Larissa, *BCH* 86 (1962), pl. 9, 6.
2. Larissa, ANS (*IGCH* 168).
3. Larissa, ANS (*IGCH* 168).
4. Larissa, ANS (*IGCH* 168).
5. Salamis, ANS (*IGCH* 168), Martin (above, n. 19), 495.
6. Miletos, ANS (*IGCH* 168), Thompson (above, n. 15), 107a.
7. Miletos, ANS (*IGCH* 168), Thompson (above, n. 15), 118b.
8. Syracuse, ANS.
9. Larissa, ANS.
10. Larissa, ANS.
11. Larissa, ANS.
12. Larissa, ANS.
13. Larissa, *ZfN* 35 (1924-25), pl. 5, 3.
14. Pherae, *ACGC*, pl. 21, 388.

¹¹⁶ Thanks are due to Otto Mørkholm, Margaret Thompson, Hyla Troxell and Nancy Waggoner for helpful and valuable suggestions and for their care in reading drafts of this paper at various stages. They are not to be held responsible for any errors nor to be thought as necessarily in agreement with all the hypotheses presented here.

ARSINOE'S NON-ERA

(PLATES 2-10)

HYLA A. TROXELL

The early posthumous portrait coins of Arsinoe II Philadelphus of Egypt, those struck by her brother-husband Ptolemy II and by his son Ptolemy III, are known in two denominations of silver and one of gold. All show on obverse Arsinoe's head. The gold octadrachms' and silver decadrachms' reverses show a double cornucopiae, the special emblem of Arsinoe Philadelphus; the silver tetradrachms' reverses bear the standard Ptolemaic eagle. All are inscribed ΑΡΣΙΝΟΗΣ ΦΙΛΑΔΕΛΦΟΥ. Similar, but very rare, gold octadrachms are known from Phoenician, Palestinian, Cypriot, and other mints, but the chief gold mint and the only mint of the silver coins was presumably Alexandria.¹

¹ For his very considerable help in and contributions to the preparation of this article, I thank the late Otto Mørkholm, a scholar whose knowledge was exceeded only by his generosity in sharing it. For their kindness in providing valuable information and material, I thank also Alain Davesne, Silvia Hurter, Georges Le Rider, Mando Oeconomides, and Martin Price.

Abbreviations used are

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| Benha | A. B. Brett, "The Benha Hoard of Ptolemaic Gold Coins," <i>ANSMN</i> 5 (1952), pp. 1-8. The hoard is <i>IGCH</i> 1694. |
| Kyrieleis | H. Kyrieleis, <i>Bildnisse der Ptolemäer</i> , <i>Archäologischer Forschungen</i> , Band 2 (Berlin, 1975). |
| Sv. | J. N. Svoronos, <i>Tà Νομίσματα τοῦ Κράτους τῶν Πτολεμαίων</i> , vols. 1-4 (Athens, 1904-8). Issue numbers with an added letter (e.g. 432a) and plates A-Δ are in the supplementary section in vol. 4. |
| Thompson | D. B. Thompson, <i>Ptolemaic Oinochoai and Portraits in Faience</i> (Oxford, 1973). |

These Alexandrian coins bear unusual issue marks on all 3 denominations: unusual in the first place because it is on the coins' obverses that they appear. No markings at all are found on the coins' reverses.² The markings are unusual in the second place because of their system of alphabetic numeration. By far the commonest Greek numbering system used the standard 24-letter alphabet increased to 27 by 3 extra letters, with A-Θ standing for 1-9, Ι-Ϟ for 10-90, P for 100, and so on. Arsinoe's coins, however, are enumerated by another system. The decadrachms, the longest series, are known with all but 3 of the letters through 2 standard 24-letter alphabets, and the first 2 letters of a third.³ With A-Ω, AA-ΩΩ, Α (= AAA), Β (= BBB), and 1 unmarked die whose style clearly places it first in the series, 51 decadrachm issues are known or presumed to have existed. The gold octadrachms are known from 3 dies without letters, again to be placed at the head of the series, and from all but 2 of the 14 letters Α through Ξ, where they stop. The tetradrachms are known from the 6 letters Α through Ι.

From these pieces Svoronos in 1904 deduced an "Era of Arsinoe," with the coins' obverse letters denoting years of an era starting with Arsinoe's death on July 9, 270 B.C.⁴ He equated the obverse dies with no letter with 271/0; Α with 270/69; Β with 269/8, and so on. In such an era, Ω would be 247/6 B.C., the last full year of Ptolemy II's reign (he died in January 246); AA would be 246/5, the first year of Ptolemy

² Except for the X between the eagle's legs on the tetradrachm reverses, which appears on all dies but the first.

³ The alphabetic marking system of the Arsinoe coins is found also on some other coinages of Ptolemy II, although never exceeding one single alphabet, and always in the normal position on the coins' reverses: e.g. the bronzes included in Sv. 408-519, and Sv. 558-98. Alphabetic numbering systems were also used in the west on certain Italian and Roman coinages which have received a good deal of scholarly attention: see, most recently, H. B. Mattingly, "Coinage and the Roman State," *NC* 1977, pp. 201-2, and A. Burnett, "The Coinages of Rome and Magna Graecia in the Late Fourth and Third Centuries B.C.," *SNR* 1977, p. 119. The way the letters were used in the west, however, differed from the Arsinoe pattern (cf. Crawford pp. 138-39 and 584 for the Roman usage), and Burnett is surely correct in denying any connection between the Egyptian and western systems.

⁴ Sv. 408-519.

III's reign; and ϐ would be 221/0, his last year. Ω (247/6 B.C., according to Svoronos) is notable not because it was the last letter of one alphabet, but because it is also the last letter of a series of similarly marked bronzes which Svoronos associated with Arsinoe's portrait coins⁵—and which Svoronos suggested were discontinued at Ptolemy II's death. The end of the decadrachm series in ϐ , which Svoronos equated with the last year of Ptolemy III's reign, seemed to provide another confirmation of the "Era of Arsinoe."

This supposed era has been more or less accepted, with more or less skepticism, for the past three-quarters of a century. Growing distrust has appeared in recent years,⁶ although no serious rebuttal has yet appeared. This paper offers such a rebuttal.

The resources of the American Numismatic Society, its collection, library, and above all its invaluable photo file compiled from sale and auction catalogues, have allowed the study of 227 decadrachms, 41 tetradrachms, and 131 gold octadrachms of Arsinoe's early posthumous Alexandrian coinage. The only augmentation to the ANS material has been one tetradrachm in the author's possession, one cast furnished by Dr. Oeconomides, and the late Dr. Mørkholm's kind gift of his photographic record of the British Museum's holdings. How very far from a corpus this number of examples is can be seen from the extensive listings of specimens in Svoronos's great compilation. Yet the 399 coins include every previously known issue and a number of new ones, and provide quite enough material to disprove Svoronos's Era of Arsinoe. In conjunction with ANS records of the Phoenician and Palestinian octadrachms of Arsinoe, firmly dated by regnal years, these 399 coins also provide at least a partial alternative chronology, and a number of consequences for other early Ptolemaic coinages.

Mørkholm has suggested that the letters on Arsinoe's coins are merely die numbers.⁷ This seems at first to be so, as in virtually every case there is but one known die for each obverse letter in each denomination.

⁵ See n. 3, above.

⁶ E.g. Mattingly (n. 3, above); Kyrieleis, p. 79; and O. Mørkholm, "The Hellenistic Period. Greece to India," p. 87, in *A Survey of Numismatic Research 1972-1977*, ed. by R. Carson, P. Berghaus, and N. Lowick (Bern, 1979).

⁷ See n. 6, above.

Yet, even after allowing for the inevitable forgeries,⁸ there remain three cases where the obverse dies do not correspond exactly with the letters.

One case is Σ in the decadrachm series. Coins which all look genuine are known from two Σ obverse dies (Plate 4, 2 and 3). On the stephane of the Σ^a die (Plate 4, 2) is a flaw, found on two of the three coins located from this obverse; perhaps this break led to the die's premature abandonment and replacement by the Σ^b die (Plate 4, 3). The second case is in the gold octadrachm series, where two Γ dies are known (Plate 7, 1 and 2). Here the genuineness of the Γ^a die is proved by the reverse link between a Θ -obverse coin (Plate 6, 3) and one of the Γ^a coins (Plate 7, 1). And the genuineness of the Γ^b die is shown by the circumstance that produces our third case of non-correspondence between letters and obverse dies: die Γ^b (Plate 7, 2) was recut to become die K (Plate 7, 3). The dotted border was filled in with a few extra dots, and two simple strokes (noticeably thinner than the upright Γ) transformed the Γ into a K. That the dies are the same is firmly established by the die breaks at the top of the head, just forward of the edge of the veil. Thus the obverse letters are not merely a means of identifying obverse dies; their significance, to which we shall return, went beyond the dies themselves.

Mattingly in 1977 noted that there was some sharing of dies between the octadrachms and tetradrachms, two denominations of approximately the same physical size.⁹ Indeed, in every possible known case the obverse dies are shared; dies A, Δ , E and Γ of the gold (where B and Γ are not known) were used to strike the silver tetradrachms also, which stop at die Γ . If and when B and Γ octadrachms appear, they will undoubtedly be found to have been struck from the B and Γ tetradrachm dies.

More reverse die linkage between obverse dies is to be expected when a corpus of Arsinoe's coinage is eventually assembled, but the limited

⁸ E.g. J. Schulman, 5 June 1930, 189 ($\Theta\Theta$ decadrachm), and Naville 1, 4 Apr. 1921, 3234 ($\Omega\Omega$ decadrachm). If the BB decadrachms Leu 20, 25 Apr. 1978, 178, and *de Hirsch* 1811 are genuine (and it is hard to imagine a coin that is not passing Bank Leu's scrutiny), they must be later strikings: the large flans, and the reverses' large lettering, cornucopiae tip style, and splayed-out fillet fringes all are quite unlike the coins here studied, but do bear resemblance to issues of, say, Ptolemy IV.

⁹ See n. 3, above.

amount found among the 399 coins studied is probably sufficient to establish that the obverse dies were used in order from start to finish. No reverse links at all were found among the decadrachms: not surprising, as the 227 decadrachms located were from no fewer than 173 reverse dies. But the octadrachms (131 coins, 73 reverse dies) and the tetradrachms (41 coins, 12 reverse dies) furnish a number of reverse links in each series, in addition to the I^b -K obverse recutting already described. Of the 11 reverse links and 1 obverse recutting, 10 are between contiguous letters, and the remaining 2 between letters only one apart.

In the following table summarizing die linkage, NL indicates dies with no obverse letters. The bracket to the left represents the I^b -K recutting; brackets to the right indicate reverse links; and horizontal lines show obverse links between the two denominations. No coins are known for the letters in parentheses. All links are illustrated.

<i>Octadrachms</i>		<i>Tetradrachms</i>
NL ^a		
NL ^b		
NL ^c		
A]	_____	A]
(B)		B]
(Γ)		Γ]
Δ]	_____	Δ]
E]	_____	E]
I]	_____	I]
H		
Θ]		
I ^a]		
[I ^b		
K		
Λ		
M]		
N]		
Ξ]		

The stylistic progression of the coins also shows that the obverse dies were used in order, or at least roughly so. At first glance the style of Arsinoe's gold and silver coins seems unvarying, boringly so. But a number of details change and successive stages can be objectively distinguished. Kyrieleis seems virtually the only author to have noted the most obvious change: the direction of the tip of the small horn of Ammon under Arsinoe's ear.¹⁰ But there are other developments: on the obverses the shape of the chignon, and whether or not the stephane is indicated under the veil; and on the reverses the decoration of the tip of the cornucopiae.

Various changes in these details allow the division of the longest series, the decadrachms, into four different groups of approximately equal size, with a few transitional issues between groups. The octadrachms divide themselves into three groups of rather unequal size, each group corresponding in its stylistic details to a particular decadrachm group. The tetradrachms, of course, can be securely placed together with the octadrachms whose obverse dies they share.

The surprising discovery is that, contrary to all previous assumptions, the letters on the gold coins turn out not to be contemporary with the corresponding letters on the decadrachms. There is no gold which corresponds to the earliest decadrachms. The earliest gold octadrachms share the stylistic features of the second decadrachm group. The next gold issues are very like the third decadrachm group; and the last few gold issues correspond to the last group of decadrachms.

A full catalogue of Arsinoe's portrait coins will have to await the assembling of a corpus, but the following résumé of issues amplifies Svoronos's listings. As before, NL indicates dies with no letter, and parentheses are used for letters for which no coins are known. Svoronos numbers are given when possible. The number of coins and of reverse dies found in the present survey is given as a rough indication of relative issue size. Representative issues of each decadrachm group are illustrated here; all octadrachm and tetradrachm obverse dies are shown; and all known die links are illustrated. For decadrachm issues

¹⁰ Kyrieleis, p. 79. Although noting that this change takes place at widely different places in the gold and silver alphabets, he fails to follow up on this fatal flaw in Svoronos's "Era."

not illustrated, a reference to a published example is given: to Svoronos, or to other publications when necessary or preferable.

Obverses (all denominations): Head of Arsinoe II Philadelphus r., wearing ribbon diadem, stephane, and veil, and with a small horn of Ammon under the ear; above, tip of a lotus-headed scepter whose shaft is seen below her chin; to l., letter or letters.

Reverses (octadrachms and decadrachms): ΑΡΣΙΝΟΗΣ ΦΙΛΑΔΕΛΦΟΥ
Double filleted cornucopiae, holding fruits and cakes.

Reverses (tetradrachms): ΑΡΣΙΝΟΗΣ ΦΙΛΑΔΕΛΦΟΥ Eagle standing l. on fulmen; between legs, X (on all but the first die illustrated).

All coins are of Ptolemaic weight.

GROUP 1: DECADRACHMS

<i>Obv. Letter</i>	<i>Coins</i>	<i>Rev. Dies</i>	<i>Sv.No.</i>	<i>Plate, Number</i>
NL	3	3	409	2, 1
A	5	5	420	2, 2
B	4	3	428	Sv. B, 11
Γ	2	2	432	Sv. 15, 19
Δ	5	2	434a	Sv. B, 12
E	11	7	444	2, 3
Ι	1	1	455	Sv. 16, 1
H	1	1	—	Gans 16, 19 Apr. 1960, 468
Θ	1	1	461	Sv. 16, 2
(I)	—	—	—	—
(K)	—	—	—	—
Λ	7	5	477	2, 4
(M) ¹¹	—	—	—	—

¹¹ Sv. 487, described with M on obverse, is known from a single example whose M Svoronos considered doubtful. Dr. Oeconomides has kindly sent a cast of the coin, and it clearly bears MM. No other M coins have been located in the present survey. The placement of the presumed M issue in Group 1 rather than with the transitional issues is of course purely arbitrary.

TRANSITIONAL: DECADRACHMS

<i>Obv. Letter</i>	<i>Coins</i>	<i>Rev. Dies</i>	<i>Sv.No.</i>	<i>Plate, Number</i>
N	3	3	488	Sv. 16, 4
≡	5	3	490	Sv. 16, 5

GROUP 2: OCTADRACHMS, DECADRACHMS
AND TETRADRACHMS

OCTADRACHMS

NL ^a	1	1	408	3, 1
NL ^b	1	1	408	3, 2
NL ^c	6	3	408	3, 3
A]	1	1	419	3, 4 (rev. die of 3, 3)
(B)	—	—	—	—
(Γ)	—	—	—	—
Δ]	1	1	434	3, 5
E]	4	3	443	3, 6 (rev. die of 3, 5); 3, 7
I]	3	1	454	3, 8 (rev. die of 3, 7)

DECADRACHMS

O	1	1	492 ¹²	4, 1
Π	4	3	495	Sv. B, 13 (obv. only)
P	5	4	496	Sv. 16, 7
Σ ^a	3	2	502	4, 2
Σ ^b	3	3	502	4, 3
T	4	4	503 ¹³	Helbing, 9 Apr. 1913, 765
Υ	8	6	508	Naville 12, 18 Oct. 1926, 2595
Φ	4	3	512	Sv. 16, 9
X	2	2	513	Myers-Adams 5, 15 Mar. 1973, 288
Ψ	4	3	517	4, 4

¹² Svoronos's illustration for this issue (pl. 16, 6) erroneously uses a second reproduction of the reverse of Sv. 512 (pl. 16, 9).

¹³ Svoronos's illustration for this issue (pl. 16, 8) is a coin whose obverse bears TT (Sv. 954); the right edge of the first T is clearly visible on the plate.

TETRADRACHMS¹⁴

<i>Obv.</i> <i>Letter</i>	<i>Coins</i>	<i>Rev.</i> <i>Dies</i>	<i>Sv.No.</i>	<i>Plate, Number</i>
A	2	1	421	4, 5 (without X on reverse)
B	17	5	429	4, 6 (rev. die of 4, 5); 5, 1
Γ	1	1	432a	5, 2 (rev. die of 5, 1)
Δ	10	4	435	5, 3; 5, 4
E	6	3	445	5, 5 (rev. die of 5, 3); 5, 6
I	5	3	456	5, 7 (rev. die of 5, 4); 5, 8 (rev. die of 5, 6)

TRANSITIONAL: OCTADRACHMS AND DECADRACHMS

OCTADRACHMS

H	5	4	459	6, 1
Θ	42	24	460	6, 2; 6, 3 (rev. die of 7, 1)





DECADRACHMS

Ω	1	1	518	6, 4
AA	10	6	937	6, 5
BB	11	8	938	6, 6














¹⁴ As mentioned above, the tetradrachms are struck from the obverse dies used for the lettered octadrachms A-I. No tetradrachms without obverse letters have been located by the present author, but two such supposed issues must be denied. Sv. 410 describes a tetradrachm issue with no letter on obverse: the illustration for the issue, however, shows a coin whose obverse letter E is not preserved (pl. 16, 13 = *BMC* p. 43, 7; pl. 8, 3 = our Plate 5, 5). And Sv. 936 (illustrated in vol. 1, p. σλ'), attributed to Ptolemy III, describes a single tetradrachm with no obverse letter and with, uniquely, the double cornucopiae reverse type of the octadrachms and decadrachms. The obverse die is the octadrachm die NL^c, and the reverse also seems to be known in the octadrachm series (see *Coin Galleries*, 20 Apr. 1961, 9). In light of the obverse die sharing of the octadrachms and tetradrachms, such an initial tetradrachm issue would be understandable, but the coin is not genuine. Dr. Oeconomides, Hélène Nicolet-Pierre, and Olivier Picard have all seen it at Athens and agree that it is a cast piece, evidently a silver cast of a gold octadrachm. I am most grateful to them for enabling the record to be set straight.

GROUP 3: OCTODRACHMS AND DECADRACHMS



OCTADRACHMS

<i>Obv.</i> <i>Letter</i>	<i>Coins</i>	<i>Rev.</i> <i>Dies</i>	<i>Sv.No.</i>	<i>Plate, Number</i>
la 	1	1	471	7, 1 (rev. die of 6, 3)
lb 	6	3	471	7, 2
K 	32	17	475	7, 3
Λ 	11	9	476	7, 4

DECADRACHMS




ΓΓ 	2	2	938a	7, 5
ΔΔ 	3	2	939	Sv. 28, 5
ΕΕ 	19	15	940	7, 6
ΙΙ 	1	1	941	Naville 1, 4 Apr. 1921, 3230
ΗΗ 	11	9	942	Glendining, 7 Mar. 1957, 370
ΘΘ 	4	4	943	Hirsch 14, 17 Nov. 1905, 589
ΙΙ 	10	5	944	Leu 2, 25 Apr. 1972, 305
ΚΚ 	7	4	945	Sv. 28, 10
ΛΛ 	5	3	946	Naville 5, 18 June 1923, 2921
ΜΜ 	15	11	947	7, 7
ΝΝ 	4	3	948	Naville 7, 23 June 1924, 1841
ΞΞ 	3	3	949	Hirsch 29, 9 Nov. 1910, 850
ΟΟ 	4	2	950	Sv. 28, 15

TRANSITIONAL: DECADRACHMS

ΠΠ 	2	2	951	Sv. Γ, 15
ΡΡ 	2	2	952	SNGBerry 1484

GROUP 4: OCTADRACHMS AND DECADRACHMS

OCTADRACHMS

M 	3	3	486	8, 1
N 	1	1	—	8, 2
Ξ 	13	6	489	8, 3 (illustration slightly oversized; rev. die of 8, 1); 8, 4 (rev. die of 8, 2)

DECADRACHMS

<i>Obv.</i>		<i>Rev.</i>		
<i>Letter</i>	<i>Coins</i>	<i>Dies</i>	<i>Sv.No.</i>	<i>Plate, Number</i>
ΣΣ	2	2	953	8, 5
ΤΤ	1	1	954	Sv. 16, 8 (called T)
ΥΥ	3	3	955	SNGBerry 1485
ΦΦ	2	2	956	G. Hirsch 34, 21 Feb. 1963, 1329
ΧΧ	1	1	957	Vinchon, 22 Feb. 1971, 182
ΨΨ	3	3	958	8, 6
ΩΩ	6	4	959	Sv. 28, 22
Α	1	1	960	Sv. 28, 24 (obv. only)
Ⲁ	8	6	961	8, 7

In the absence of a corpus, the totals of examples and dies found for the various denominations in the different groups may serve as a preliminary guide to the volume of the coinage.¹⁵

	<i>Ocladrachms</i>			<i>Decadrachms</i>			<i>Tetradrachms</i>		
	<i>Obv.</i>	<i>Rev.</i>		<i>Obv.</i>	<i>Rev.</i>		<i>Obv.</i>	<i>Rev.</i>	
	<i>Coins</i>	<i>Dies</i>	<i>Dies</i>	<i>Coins</i>	<i>Dies</i>	<i>Dies</i>	<i>Coins</i>	<i>Dies</i>	<i>Dies</i>
<i>Group 1</i>				40	10	30			
<i>Transitional</i>				8	2	6			
<i>Group 2</i>	17	7	8	38	10	31	41	6	12
<i>Transitional</i>	47	2	28	22	3	15			
<i>Group 3</i>	50	3	30	88	13	64			
<i>Transitional</i>				4	2	4			
<i>Group 4</i>	17	3	8	27	9	23			
<i>Totals</i>	131	15	74	227	49	173	41	6	12

As the transitional coins should probably be considered as the initial issues of the groups which follow them, perhaps a clearer presentation of the size of the various groups would be as follows.

¹⁵ The Ⲁ-K die is counted as 1 only. Totals reflect shared dies.

	<i>Octadrachms</i>			<i>Decadrachms</i>			<i>Tetradrachms</i>		
	<i>Obv.</i> <i>Coins</i>	<i>Rev.</i> <i>Dies</i>	<i>Dies</i>	<i>Obv.</i> <i>Coins</i>	<i>Rev.</i> <i>Dies</i>	<i>Dies</i>	<i>Obv.</i> <i>Coins</i>	<i>Rev.</i> <i>Dies</i>	<i>Dies</i>
<i>Group 1</i>				40	10	30			
<i>Transitional and</i>									
<i>Group 2</i>	17	7	8	46	12	37	41	6	12
<i>Transitional and</i>									
<i>Group 3</i>	97	5	57	110	16	79			
<i>Transitional and</i>									
<i>Group 4</i>	17	3	8	31	11	27			
<i>Totals</i>	131	15	73	227	49	173	41	6	12

The stylistic features which distinguish the four groups will be discussed in turn. On the obverse they are the depiction of the chignon, whether or not the stephane is indicated under the veil, and the shape of the small horn of Ammon under Arsinoe's ear. On the reverses (of the decadrachms and octadrachms only, of course) the crucial feature is the degree of elaboration of the tip of the double cornucopiae.

Arsinoe's chignon is a coiled braid of hair. In Group 1 (Plate 2, 1-4) it is shown in a rather tentative fashion, hardly projecting from the head at all on the earliest dies. Both the right and left sides of the coil are often indicated sketchily, so that with a little effort the coil can be perceived as an oval. In Group 2 (Plates 3-5) the coil is seen completely in profile, its back edge straight, and the folds of the veil continue to the back edge without interruption. In Group 3 (Plate 7), especially on the earliest dies, the clinging veil clearly reveals the coiled braid, which is seen, as if slightly from the rear, as a complete oval. Of the decadrachms transitional between Groups 2 and 3, one (AA, Plate 6, 5) shows a clearly oval chignon; the following issue (BB, Plate 6, 6) returns to the flat chignon of Group 2. In Group 4 (Plate 8) a double row of four rather large lumps forms the chignon.

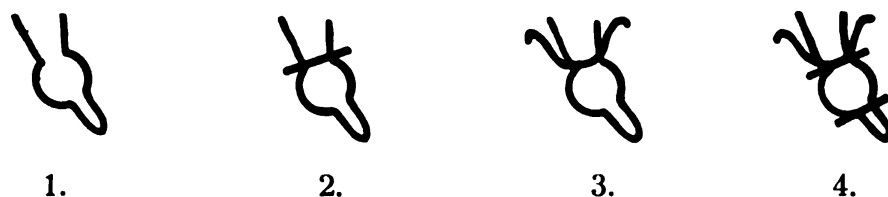
The continuation of the stephane under the veil is shown only on Group 3 (Plate 7), and, weakly, on the two transitional decadrachms AA and BB (Plate 6, 5 and 6).

The horn of Ammon in Group 1 (Plate 2, 1-4) curves all around the ear, the tip reaching to the lowest of the five sections of hair at the brow; and the lowest of the loose wisps of hair at the hairline ends in front of the upright portion of the horn. In Group 2 (Plates 3-5) the horn still

curves around the ear, but its tip is not so high: it does not reach the lowest hair section, and the lowest loose wisp of hair ends above it. This treatment of the horn continues through the transitional issues on Plate 6. On all dies in Groups 3 and 4 (Plates 7 and 8), however, the horn curves downward.

On Arsinoë's reverse dies occur small but unmistakable changes in the elaboration of the tip of the cornucopiae. Figure 1 shows the portion below the lower ribbed sections of the bodies.

FIG. 1



In Group 1 (Plate 2, 1–4) the tip is shown as in Fig. 1, 1, a simple sphere above the terminal point. In Group 2 (Plates 3–5) a projection at either side above the sphere has been added, as in Fig. 1, 2: presumably this is a profile representation of a disc. On the transitional coins between Groups 2 and 3 (Plate 6) a short-lived intermediate form appears, as in Fig. 1, 3, where the disc is replaced by a calyx-shaped ornament. This calyx appears on the Ω decadrachms and on all known H and a very few of the Θ gold octadrachms (Plate 6, 1, 2, and 4). On the other transitional coins (Plate 6, 3, 5, and 6) and on all of Groups 3 and 4 (Plates 7 and 8) the cornucopiae ends in an elaborate tip, as in Fig. 1, 4, with calyx, disc, sphere, disc, and terminal point.

The four details just described furnish the clearest and most definitive criteria for dividing Arsinoë's coins into the four groups, but three other stylistic changes are also worthy of note. The two small central fruits on the cornucopiae, the two which sit on the invariably present small tray or "bridge" between the two cornucopiae, are not identifiable, at least by the present author, but one of them often shows vertical ribbing, dividing the fruit into three or four segments, and the other usually seems partially covered by three leaves or perhaps sections of a shell

which leave a triangular open space in the center of the fruit (or nut?).¹⁶ Fig. 2 shows a rough sketch of the two fruits.

FIG. 2



The significance of these fruits is that their relative positions as shown are those of the decadrachms from Γ on, and on all of the gold. Only on the decadrachms A- Γ , on some of those with E (no clear examples of Δ have been located), and on the decadrachms with no letter are the fruits' positions reversed (e.g., Plate 2, 1-3), which would seem to confirm that the no-letter decadrachm die was indeed the first in its series.

Another change, which occurs gradually, is the degree of agitation of the cornucopiae fillet to the right. The fillet to the left follows the curve of the cornucopiae throughout the coinage, but, starting with the transitional issues on Plate 6, the right fillet on most dies becomes ever more sharply curved. The shape of the curves varies between the gold and silver, but coins in both metals show an increasingly agitated right fillet which, if straightened out, would be ever longer than the left fillet.

Finally, there is the general appearance of the portraits.¹⁷ That of Group 1, and especially the earliest, no-letter decadrachm (Plate 2, 1) is of a heavy-featured woman, with the extremely wide, staring eye and barrel chin of the dynasty (cf. Plate 2, A). The portrait of Group 2 (Plates 3-5) is the finest, of course idealized, showing a thinner, finer, more youthful and quite lovely face, with the staring eye more gently treated. The head on Group 3 (Plate 7) is similar to that on Group 2, more attenuated, with a somewhat haughty expression and again a bulging eye. Group 4 (Plate 8), where the heads actually measure slightly larger than

¹⁶ Scale seems unimportant in the depiction of cornucopiae contents: see the enormous ear of grain in Berenice's cornucopiae (Plate 10, B-C).

¹⁷ On the portraits, see also pp. 61-62.

most earlier ones, shows a passive, full-featured woman of no great individuality; the obvious intelligence and forcefulness of the earlier portraits is gone.

To recapitulate: the first group of Arsinoe's portrait coins was of decadrachms only; the second of octadrachms, decadrachms, and tetradrachms; and the third and fourth of octadrachms and decadrachms. The letters found on the obverse dies of each denomination occur in order. The tetradrachms, with A-I, must be contemporary with the similarly lettered gold octadrachms, as their obverse dies are shared. But there is no correlation between the octadrachms' obverse letters and those of the decadrachms. Twelve or so decadrachm issues appeared before the gold started to be struck; and the last of the 51 decadrachm issues were contemporary with the last of the 15 gold issues. This alone indicates that the letters cannot denote years of an era; and the chronology worked out below provides still more proof.

An examination of stylistic changes in the Arsinoe portrait gold octadrachms from the Phoenician and Palestinian mints of Tyre, Sidon, Joppa, Ace-Ptolemais, and Gaza furnishes the basis for an absolute dating of the main Arsinoe series at Alexandria. These eastern octadrachms are similar in every respect to the Alexandrian ones, except that they bear mint markings, subsidiary monograms, and, instead of obverse letters, reverse *dates*: the endearing Phoenician custom of dating coins resulted in these octadrachms being firmly dated by regnal years of Ptolemy II and III. The coins are extremely rare: only 42 of them have been located by this author. Their dates range from year 25 of Ptolemy II (261/0 B.C.) to year 6 of Ptolemy III (242/1 B.C.).¹⁸ That

¹⁸ Svoronos's Julian dates for the regnal years are not quite accurate. I follow T. C. Skeat, *The Reigns of the Ptolemies*, Münchener Beiträge zur Papyrusforschung und antike Rechtsgeschichte 39 (1954), p. 11. Regnal years started on the Egyptian New Year's Day, which at this period fell in late October. Ptolemy II's year 25 thus ran from October 261 to October 260, and his year 35 from October 247 until his death in January 246. Ptolemy III's year 1 then started immediately, lasting, however, only until the next New Year's Day in October 246, when his year 2 commenced. Year 6 thus spanned the Julian years 242 and 241.

A few Arsinoe octadrachms have been erroneously dated to years prior to 261/0 B.C. Sv. 794 (Joppa) was hesitantly dated by Svoronos to 263 B.C. because of its KΓ date. The coin, however, belongs with the similarly marked silver issues recently shown by Otto Mørkholm to belong instead to the twenty-third year of Ptolemy

this range is the full one, despite the gold's scarcity, is shown by the similarly dated and far more common accompanying ΠΤΟΛΕΜΑΙΟΥ ΣΩΤΗΡΟΣ tetradrachms from the same five mints, which all fall in precisely the same period.

Quite a few new issues have appeared since Svoronos's work was published, and a tabulation of the 42 coins located by the present author follows. Mint by mint, the listings give the years B.C., the coins' markings from left to right, and the Svoronos number for the issue. The next column, with F or O, U or D, and 1 or 2, is the important one. It indicates whether Arsinoe's chignon is flat, F, or oval, O; whether the tip of the horn of Ammon points up, U, or down, D; and whether the bottom of the cornucopiae is decorated with a simple disc, 1, or the calyx ornament, 2. These style changes will be discussed below. The coins are then numbered and listed, and die links indicated where ascertainable. Some dies are so close and Svoronos's plates often so poor that certainty was not always possible; but the links are not necessary to the arguments which follow.

All coins except 37 and 42 bear the date between the cornucopiae and the left fillet; all except 42 have the mint marking and any subsidiary markings between the cornucopiae and the right fillet.

TYRE

259/8 **£** **†** — FU1 1.¹⁹ Numismatic Fine Arts 4, 24
Mar. 1977, 446 = Gans 16, 19
Apr. 1960, 464 = Hirsch 32, 14

III: see below, pp.66-67. An octadrachm with markings of club and Σ (Benha 15) was attributed by Brett to Tyre in 268 B.C., but the coin is of Salamis, and is later: see below, p. 63.

¹⁹ On coin 1 are visible two markings, K at the very edge of the flan to lower left, and P to right. The right-hand marking is the mint marking, as discussed above, and in n. 21; thus the coin is of Tyre. The left-hand monogram is cut off by the edge of the flan, and should be completed as K , or KI , year 259/8 B.C. Dates from KA through KH were almost invariably expressed in monogram form at all the Phoenician and Palestinian mints on the Arsinoe octadrachms and on the Ptolemy Basileos silver tetradrachms which preceded them, as well as the Ptolemy Soter tetradrachms which accompanied them.

						Nov. 1912, 594 = Hirsch 18, 27 May 1907, 2512
253/2	Λ ϣ Θ	—	FU2	2.	Leu 25, 23 Apr. 1980, 194 (Plate 9, C). The calyx is small, but unmistakably pre- sent.	
252/1	ΛΔ ϣ Θ	680	FU2	3.	Sv. pl. 19, 26	
			FU2	4.	Sotheby, 20 July 1914, 42 = Sotheby, 26 Apr. 1907, 32. Dies of 3	
251/0	ΛΕ ϣ Θ	685	FU2	5.	Sv. pl. 20, 3	
			FU2	6.	ANS (Plate 9, D). Dies of 5	
249/8	ΛΙ ϣ Θ	—	FU2	7.	Benha 16. Obv. die of 5	
			FU2	8.	ANS. Obv. die of 5; rev. die of 7	
			OD1	9.	Stack's, 20 Jan. 1938, 131	
248/7	ΛΗ ϣ Θ	696	FU2	10.	Sv. pl. 20, 7	
			FD2	11.	Auctiones 12, 29 Sept. 1981, 178	
247/6	ΛΘ ϣ Θ	699	FD2	12.	Sv. pl. Γ, 1. Obv. die of 10	
			FD2	13.	Benha 17. Dies of 12	
246	A ϣ Θ	1011	FD2	14.	Sv. pl. 31, 1	
246/5	B ϣ Θ	1012	FD2	15.	Sv. pl. 31, 2. Dies of 14, the date recut	
			FD2	16.	ANS (Plate 9, F). Obv. die of 14	
244/3	Δ ϣ Θ	1018	FD2	17.	Sv. pl. 31, 6 (London = <i>BMC</i> , p. 42, 4) (Plate 9, G)	
			FD2	18.	Benha 21. Dies of 17	

SIDON

256/5	Λ ΣΙ ϣ	—	FU1	19.	Münz. u. Med. 19, 5 June 1959, 582
			FU1	20.	Leu 18, 5 May 1977, 275 = Münz. u. Med. 25, 17 Nov. 1962, 493 (Plate 9, B). Rev. die of 19

253/2	Λ Γ Σ Ι Δ Ι	—	FU1	21.	London. Obv. die of 20
250/49	Λ Γ Σ Ι Μ	747	FU2	22.	Sv. pl. 21, 22. Perhaps obv. die of 20
249/8	Λ Ι Σ Ι Δ Ι	750	FU2	23.	Sv. pl. 22, 3. Perhaps obv. die of 20
	Λ Ι Σ Ι Μ	752	FU2	24.	Sv. pl. 22, 1. Perhaps obv. die of 20
248/7	Λ Η Σ Ι Μ	754	FU2	25.	Sv. pl. 22, 5 = Leu 13, 29 Apr. 1975, 340. Obv. die of 20
			FU2	26.	Canessa 3, 28 June 1923, 94. Obv. die of 20; rev. die of 25
			FU2	27.	Numismatic Fine Arts 6, 27 Feb. 1979, 430. Obv. die of 20; rev. die of 25
244/3	Δ Σ Ι Μ	1028	FU2	28.	Sv. pl. 32, 4
243/2	Ε Σ Ι Μ	1030	FU2	29.	Sv. pl. 32, 6
242/1	Γ Σ Ι Μ	1032	FU2	30.	Sv. pl. 32, 9
			FU2	31.	Glasgow = <i>Hunter</i> , vol. 3, p. 377, 22

ACE-PTOLEMAIS

251/0	Λ Ε Μ Θ	779	OU2	32.	Sv. pl. 25, 14
			OU2	33.	Vinchon, 2 Dec. 1975, 180 (Plate 9, E). Dies of 32
			OU2	34.	Hess-Leu, 4 Apr. 1963, 103 = Münz. u. Med. 11, 23 Jan. 1953, 87. Rev. die of 32
246/5	Β Μ Α	1034	FU2	35.	Sv. pl. 32, 12
242/1	Γ Μ Θ	—	FU2	36.	Leu 22, 8 May 1979, 176 = Münz. u. Med. 52, 19 June 1975, 239 = Münz. u. Med. 25, 17 Nov. 1962, 510 (Plate 9, H)

JOPPA

261/0	𐤀𐤋𐤊	—	FU1	37. ²⁰	Münz. u. Med. 52, 19 June 1975, 237 (Plate 9, A)
246	A 𐤀𐤋𐤋	—	FD2	38.	ANS = Benha 20
245/4	𐤀𐤋𐤋 𐤀	1040	FD2	39.	Sv. pl. 32, 21
244/3	Δ 𐤀𐤋𐤋	—	FU2	40.	ANS
242/1	𐤀𐤋𐤋 𐤀	—	FU2	41.	Münz. u. Med. 25, 17 Nov. 1962, 539

GAZA

257/6	𐤀𐤋𐤋 𐤀	823	FU1	42. ²¹	Sv. pl. 24, 4
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These dated Phoenician and Palestinian octadrachms do not repeat every stylistic variation of the main Alexandrian series. The only changes which can be detected are the most obvious ones: whether the chignon is flat or oval, whether the horn of Ammon turns up or down, and whether or not the calyx is present on the cornucopiae tip (where it is not, the cornucopiae is ornamented with a simple disc, as on Series 2; as at Alexandria, no gold corresponds to the decadrachms of Group 1). I have been very conservative in indicating the substitution of an oval for a flat chignon, and the change from an up-turned to a down-turned horn: only definitely oval chignons, and only strongly down-turned horns have been so described. Further, the cornucopiae tip with calyx is not the same as that of Groups 3 and 4 at Alexandria: in Phoenicia and Palestine, as in Cyprus, the calyx is very rarely accompanied by the two discs above and below the sphere which are found with it in Egypt. The addition of the calyx ornament is, however,

²⁰ Coin 37 is the earliest known Phoenician or Palestinian octadrachm issue, and dates from the first year of the accompanying Ptolemy Soter tetradrachms. The form of its civic monogram is that of the Ptolemy Soter tetradrachm issue Sv. 795 of the same year (given erroneously in the text: see pl. 23, 2); and the placement of the octadrachm's date to upper right is the same as that of the tetradrachms—understandable on this initial gold issue.

²¹ Coin 42, Gaza's sole known octadrachm, is the only octadrachm known to me of the period in question from Phoenicia, Palestine, or any of the Cypriot mints to bear the civic marking to the left of the cornucopiae: the wider space between the cornucopiae and the right-hand fillet was otherwise the invariable spot chosen for the coins' most important marking, the mint indication.

a decisive and easily spotted change: its appearance in Phoenicia and Palestine provides a terminus ante quem for its introduction at Alexandria, and thus for the introduction of Group 3.

The following table shows in convenient form when these three style changes occurred on the known Phoenician and Palestinian octadrachms. The abbreviations are those used in the listing of issues above.

As can be seen, the down-turned horn of Ammon is found only at Tyre, from 249/8 to 244/3, and at Joppa, from 246 to 245/4. The oval chignon appears only twice, at Ptolemais in 251/0 and at Tyre in 249/8. In contrast, the calyx ornament, once introduced in 253/2 B.C., is found on every known subsequent die but one (at Tyre, 249/8).²² Group 3

		<i>Tyre</i>	<i>Sidon</i>	<i>Ace- Ptolemais</i>	<i>Joppa</i>	<i>Gaza</i>
261/0	KE				FU1 (Pl. 9, A)	
260/59	KL					
259/8	KI	FU1				
258/7	KH					
257/6	KΘ					FU1
256/5	Λ		FU1			
255/4	ΛA					
254/3	ΛB					
253/2	ΛΓ	FU2 (Pl. 9, C)	FU1 (Pl. 9, B)			
252/1	ΛΔ	FU2				
251/0	ΛE	FU2 (Pl. 9, D)		OU2 (Pl. 9, E)		
250/49	ΛC		FU2			
249/8	ΛI	FU2, OD1	FU2			
248/7	ΛH	FU2, FD2	FU2			
247/6	ΛΘ	FD2				
246	A	FD2			FD2	
246/5	B	FD2 (Pl. 9, F)		FU2		
245/4	Γ				FD2	
244/3	Δ	FD2 (Pl. 9, G)	FU2		FU2	
243/2	E		FU2			
242/1	C		FU2	FU2 (Pl. 9, H)	FU2	

²² As it was on the Phoenician and Palestinian issues, so it was on all late posthumous octadrachms struck anywhere under Ptolemy III and his successors. The oval chignon was a short-lived phenomenon. The horn of Ammon is found on later issues turned either up or down. The calyx ornament, however, became an invariable feature of the cornucopiae not only on all late posthumous Arsinoe octadrachms, but also on the gold of later Ptolemaic rulers.

at Alexandria, where the calyx first appears, thus must have been being struck at least by 253/2 B.C. Although earlier data is scanty (four coins in all), the calyx's absence prior to 253/2, as well as on the Sidonian coin of 253/2, probably allows us to place the start of Group 3 in that year. Thus the change from Group 2 to Group 3, the approximate midpoint of the decadrachm dies, is to be dated ca. 253/2 B.C.

It is hard to believe that the Phoenician gold would have been introduced before that at Alexandria, and therefore the start of the Alexandrian gold, and of all of Group 2, may be put no later than 261/0 B.C. A likely occasion for the introduction of Arsinoe's gold coins would have been the recent receipt of the diverted revenues of the *ἀπόμοιρα*, the enormous one-sixth share of the produce of vineyards and orchards: in Ptolemy II's twenty-third regnal year, 263/2 B.C., these revenues were diverted from the cults of the native Egyptian gods to that of the goddess Arsinoe Philadelphus.²³ The amount of gold struck at Alexandria with Arsinoe's portrait was not extraordinary—only 17 obverse dies are known or presumed to have existed—and other gold was struck before and after hers, but the propaganda value for the recently created goddess would have been considerable, and may have helped to “sell” the diversion of the revenues.

Neither the transition from Group 3 to Group 4 nor the end of Group 4 can be dated with objectivity or precision. The present author does see, however, in the rather fat and bovine faces of Ptolemy III's eastern issues (Plate 9, F-H), and especially in those of the last three years, 244–241 B.C. (Plate 9, G-H) a strong similarity to those of the heavy, placid portraits of Group 4 (Plate 8). It seems likely that both reflect the plump features of the new queen, Berenice II (Plate 10, B-C, and G). We may perhaps then assume that Group 4 started early in Ptolemy III's reign, and ended at the time of the abrupt end of all the Phoenician and Palestinian issues of both Arsinoe octadrachms and Ptolemy Soter tetradrachms, in 241 B.C. No real proof, however, can be offered that this was the terminal date at Alexandria.

The start of the whole series, the decadrachms of Group 1, cannot be dated precisely, either. As the coins depict the queen with the

²³ B. P. Grenfell, *The Revenue Laws of Ptolemy Philadelphus* (Oxford, 1896), cols. 36–37.

attributes of a goddess, however, they can only have started after her death in July 270 B.C.

The new chronology suggested here may be summarized as follows.

270 B.C. or later— ca. 261/0 B.C.	Group 1:	⌘	Decadrachms to M
ca. 261/0–253/2 B.C.	Transitional:	⌘	Decadrachms N–Ξ
	Group 2:	Λ	Octadrachms to Ι
		⌘	Decadrachms O–Ψ
		⌘	Tetradrachms A–Ι
ca. 253/2–246? B.C.	Transitional:	Λ	Octadrachms H–Θ
		⌘	Decadrachms Ω–BB
	Group 3:	Λ	Octadrachms Ι ^a –Λ
		⌘	Decadrachms ΓΓ–OO
246?–242/1? B.C.	Transitional:	⌘	Decadrachms ΠΠ–PP
	Group 4:	Λ	Octadrachms M–Ξ
		⌘	Decadrachms ΣΣ–B

Hoard evidence is of little use, but does furnish some slight confirmation of this chronology. Two hoards are helpful. One is the Megalopolis 1947 Hoard (*IGCH* 180), which contained tetradrachms of Alexander III (lifetime and posthumous), Philip III, Lysimachus, and Ptolemy II (14 coins); and two decadrachms of Arsinoe, with obverse letters EE and ΣΣ. The hoard's burial date of ca. 225 B.C. is determined by the latest Alexander coins it contained; with this Svoronos's dates for the decadrachms of 242/1 and 229/8 B.C., during the reign of Ptolemy III, accord well. But while in general the presence in the Peloponnese of Ptolemaic silver from the reign of Ptolemy II is well attested (7 hoards; 101 coins), the presence there of silver struck under Ptolemy III is quite exceptional (1 hoard; 4 coins, not including the decadrachms in question).²⁴ On the dating here proposed for Arsinoe's coins, the EE and ΣΣ decadrachms would have been struck in the latter years

²⁴ See T. Hackens, "A propos de la circulation monétaire dans le Péloponnèse au III^e av. J.C.," *Antidorum W. Peremans sexagenario ab alumnis oblatum*, *Studia Hellenistica* 16 (Louvain, 1968), pp. 74–82.

of Ptolemy II's reign (the $\Sigma\Sigma$ coin possibly in the first year or so of Ptolemy III's rule). This earlier dating brings them more into line not only with the 14 tetradrachms of Ptolemy II in the Megalopolis Hoard, but also with the strong pattern of Ptolemaic coins known from other Peloponnesian finds.

The other useful mixed hoard is the Gülnar 1980 Hoard.²⁵ This enormous deposit from Cilicia, over 5,200 pieces of silver in all, contained ca. 2,600 Alexanders, ca. 35 coins of later Macedonian rulers to Antigonus Gonatas, 144 Lysimachi, 62 Attalids, 246 Seleucids, and some 2,168 Ptolemaic coins—among which were 2 tetradrachms and 13 decadrachms of Arsinoe. The two latest decadrachms were of the OO and $\Psi\Psi$ issues, dated 232/1 and 224/3 by Svoronos's "Era," but ca. 246–241 in the present paper. The preliminary hoard report suggests a burial date of ca. 225–220 B.C.—but so late a date is based in part on very rough estimates of the various non-Ptolemaic series' terminal dates, and in part on Svoronos's date for the $\Psi\Psi$ decadrachm. At the moment of the writing of the present article, however (June 1983), further examination of the separate series is leading the hoard's publishers to favor an earlier date, ca. 240 B.C.²⁶ The final publication of this important deposit is eagerly awaited: but from current information it appears to provide solid confirmation that the Arsinoe decadrachms ceased earlier than Svoronos believed, and thus that his Era cannot be.

The chronology proposed in the present paper also shows that the letters cannot denote years. To take the decadrachms, the longest series, and the basic one: if they started promptly in 270 B.C., the year of Arsinoe's death, and if the change from Group 2 to Group 3 (probably the best documented date in the new chronology) occurred ca. 253/2, then the maximum number of years between these two points is 19 (270–252, inclusive). Yet the number of decadrachm issues to the end of Group 2 is 23 (A- Ψ) or, if we count the issue with no letter, 24. Clearly the letters cannot denote years, even aside from the circumstance that

²⁵ E. Laroche and A. Davesne, "Les Fouilles de Meydandjik près de Gülnar (Turquie) et le trésor monétaire hellénistique," *CRAI* 1981, pp. 356–70 provides a preliminary report.

²⁶ Correspondence from A. Davesne and G. Le Rider, to both of whom I am extremely grateful for their generous sharing of both information on the hoard and their present thoughts about its burial date.

quite different letters were used concurrently on the decadrachms and octadrachms. The letters can only be issue numbers of some sort, assigned separately to the different metals.

These issues seem to have varied greatly in size, especially the gold ones, where Θ and K alone account for well over half of the known coins and reverse dies: the single Θ die is, even in this preliminary survey, found coupled with no fewer than 24 reverse dies, only one of which is shared with another obverse die. But the definition of the issues remains obscure: they conceivably represented sporadic half-years, months, or some other chronological unit; or perhaps they simply marked certain amounts of bullion ordered to be struck from time to time. We cannot tell, but in any case the obverse letters on Arsinoe's coins are not year dates, but simply issue numbers.

Arsinoe was obviously a highly capable and energetic woman who took an active role in affairs. She is credited by modern scholars with having contributed greatly to the eventual success of the First Syrian War, 276–273 B.C. The Chremonidean Decree of 266 B.C. makes the remarkable statement that Ptolemy II in regard to the affairs of Greece “followed the policy of his ancestors and that of his sister.”²⁷ Many queens of Macedonian blood were noted for their active participation in affairs, but this is the first official recognition given to any of them as a formulator of state policy. The immense popularity of the dead queen's cult is too well known to need description here: Egyptians, Greeks, and Macedonians paid her honor in both private and public ways. It is a pity that we know no details of her activities.

The portrait of Ptolemy I was continued on the Ptolemaic coinage until the dynasty's end, emphasizing the unbroken continuity and divinity of the ruling house. Helmut Kyrieleis has recently made an eminently sensible and long-needed statement urging that Arsinoe's coin portraits, the only other ones to last through many successive reigns, should be considered in the same way. It was not personal considerations—as so often suggested today—which led Ptolemy II to place her portrait on the coins; not a mere desire to honor the dead queen as an

²⁷ *IG II²*, 687: ὁ τε βασιλεὺς Πτολεμαῖος ἀκολούθως τεῖ τῶν προγόνων καὶ τεῖ τῆς ἀδελφῆς προ[α]ιρέσει φανερός ἐστιν σπονδάζων

individual, or to promote her cult. It was, rather, his taking advantage of the actively earned popularity of his full sister and co-ruler to strengthen his own position as a member of the ongoing and divine Ptolemaic dynasty.²⁸ That the Arsinoe portrait coins were not marked by an "Era of Arsinoe" but simply with issue marks strongly supports this view of the Arsinoe coinage.

COMMENTS ON SOME RELATED PTOLEMAIC COINAGES

The new chronology and interpretation of the early posthumous portrait coinage of Arsinoe Philadelphus forces a reconsideration of a number of related Ptolemaic series. Some of these are provincial or late posthumous Arsinoe portrait issues; others are associated issues. Comments on some of these related Ptolemaic coinages follow, in approximately chronological order.

1. Ptolemy II: Ptolemy Soter Tetradrachms with X on Reverse²⁹

The tetradrachms have X between the eagle's legs just as on Arsinoe's tetradrachms, and no letter, B, Γ or Δ to the left of the obverse head as on Arsinoe's coins. As the letters on Arsinoe's different denominations are independent of each other and occur at different times, these Soter tetradrachms cannot be dated by their obverse letters. The X on reverse, however, would seem to associate them with the Arsinoe Group 2 tetradrachms, similarly marked, and thus these Soter tetradrachms would appear to have been struck ca. 261/0–253/2 B.C.

2. Ptolemy II: Bronzes with No Letter, or A to Ω on Reverse³⁰

Eight denominations of bronze coins of standard Ptolemaic types, with letters between the eagle's legs on reverse, were dated by Svoronos according to the "Era of Arsinoe." Even approximate dating by the

²⁸ Kyrieleis, p. 155.

²⁹ Sv. 411, 430, 433, 436.

³⁰ Scattered throughout Sv. 408-519.

reverse letters is impossible for the reason given above—that letters on Arsinoe's different denominations occur at different times. The occurrence of the letters on the bronzes' reverses would seem in any case to show no necessary connection with the obverse lettering of Arsinoe's portrait coins. These bronzes may well be later than Svoronos thought.

3. Ptolemies II-V(?): Gold Theon Adelphon Octadrachms, Tetradrachms, and Smaller Coins³¹

The coins bear on reverse jugate portraits of Ptolemy II and Arsinoe II, with inscription ΑΔΕΛΦΩΝ; and on obverse jugate portraits of their parents Ptolemy I and Berenice I, with inscription ΘΕΩΝ (see Plate 2, A). They were struck by several successive Ptolemies, but papyri show that it was Ptolemy II who initiated the series, probably somewhere in the decade of the 260s.

The papyri are two from the archives of Zenon, estate manager to Apollonios, Ptolemy II's chief finance minister.³² One is a letter from Demetrios, seemingly the director of the mint at Alexandria, dated in October 258 B.C. Demetrios speaks of restriking the old *τρίχρυσα* (gold pentadrachms) into the "new" money. This new money was the gold now struck as octadrachms, and could, of course, have been either the Theon Adelphon octadrachms or the earliest Arsinoe octadrachms. The second Zenon papyrus is an account of a bank deposit listing specific numbers of coins: *τρίχρυσα* (gold pentadrachms), *μναιεῖα* (pieces of 100 drachms: gold octadrachms), and *πεντηκοντάδραχμα* (pieces of 50 drachms: gold tetradrachms). This papyrus bears no date, but has been dated on internal evidence to 258/7 or 257/6; its importance lies in the mention of the *πεντηκοντάδραχμα*, which can only be the tetradrachms of the Theon Adelphon series, the earliest Ptolemaic gold

³¹ Sv. 603–6, 613–14, 616a, 618, 621, 934, 1229, 1247–48 (most illustrations confuse obverse and reverse). The exceedingly rare issue 934 varies the placement of portraits and inscriptions.

³² P. Cairo Zenon 59021 and 59022: C. C. Edgar, ed., *Catalogue général des antiquités égyptiennes du Musée du Caire: Zenon Papyri*, vol. 1 (Cairo, 1925). See also W. Schubart, "Die ptolemäische Reichsmünze in den auswärtigen Besitzungen unter Philadelphos," *Z/N* 1922, pp. 68–92.

of this denomination. Thus the Theon Adelphon coins were in use at least by the early 250s, and their introduction would not have been far from the date of Arsinoe's death—but whether before or after it is impossible to guess.

The present down-dating of the start of Arsinoe's portrait gold to ca. 261/0 B.C. now leaves ample room for the Theon Adelphon coins earlier, either preceding or accompanying the earliest Arsinoe decadrachms, those of Group 1. The resemblance between Arsinoe's portraits on these earliest decadrachms and those on the Theon Adelphon coins is striking (compare the reverse of Plate 2, A, with Plate 2, 1). These early decadrachms are rarely pictured or discussed; it is the handsomer portraits of Groups 2 and 3, in both silver and gold, that one usually finds taken as Arsinoe's likeness.³³ The heavy-featured, wide-eyed, barrel-chinned woman of Group 1, however, is as close as she can possibly be to the portrait on the Theon Adelphon gold.

Kyrieleis regards the Theon Adelphon coins as worthless for identifying Arsinoe's sculpture portraits, stating that the Arsinoe head on the coins' reverses differs in no way from the portrait of Berenice on their obverses.³⁴ It actually does vary in one significant way: Arsinoe virtually always has short wisps of hair escaping along the browline from the pulled-back hair sections—precisely as on the Arsinoe portrait coins—whereas Berenice virtually always does not.

Thompson draws a clear distinction between portraits of Arsinoe the woman and Arsinoe the goddess. She sees the woman, not the goddess, on the Theon Adelphon coins, and on the well known portrait oinochoai. "The receding forehead is rounded; the eyes, wide open; the nose long and slightly retroussé The small mouth is sinuous and pursed, set off from the little round chin by a marked groove. The neck is ringed by a prominent 'collar of Venus'."³⁵ This is a description of

³³ E.g. Kyrieleis, pl. 70, 1 (BB decadrachm) and 70, 2 (Λ octadrachm); Thompson, pl. 73, a (Δ tetradrachm) and 73, b (Σ decadrachm); G. H. Macurdy, *Hellenistic Queens* (Baltimore, 1932), pl. 12, 3 (Θ octadrachm); Newell, *Royal Greek Portrait Coins* (New York, 1937), pl. 15, 1 (Θ octadrachm) and 2 (AA decadrachm).

³⁴ Kyrieleis, p. 80. Kyrieleis illustrates only two exceptional coins of the Theon Adelphon series: one of Sv. 934 (see above, n. 31), pl. 8, 1-2; and one of a coin struck under, probably, Ptolemy V, pl. 8, 3.

³⁵ Thompson, p. 82.

Arsinoe's portraits on the faience oinochoai which Thompson proceeds quite rightly to say resemble those of the Theon Adelphon issue. But the description fits also the portraits on the earliest decadrachms, which one then expects show a relatively true likeness of the woman Arsinoe.

Thompson goes on to suggest that the portrait on the Arsinoe portrait coins (as opposed to the Theon Adelphon coins) shows Arsinoe the goddess, idealized, finer, and more beautiful. She makes an important distinction here, but the comment applies only to the portraits of Groups 2 and 3, as her illustrations of the portrait coins reveal.³⁶ On these groups we may well see Arsinoe the goddess, as opposed to Arsinoe the woman.

4. Ptolemies II and III: Arsinoe Octadrachms from Citium, Paphos and Salamis

Svoronos assigned the Cypriot gold to the years immediately following Arsinoe's death,³⁷ but this dating is no longer tenable. A number of Cypriot issues have appeared since Svoronos's time, and a compilation of these rare coins known to the present author follows. All can be roughly dated by the criteria used above: whether the chignon is flat or oval, whether the horn of Ammon turns up or down, and whether or not the calyx ornament is present.³⁸ Although only 13 coins have been found for the 3 mints, these criteria place some at each mint in the time of Alexandrian Group 2, ca. 261/0–253/2 B.C., and others at Citium and Salamis in the time of Group 3 or 4, ca. 253/2–241? B.C. The Cypriot gold thus would seem to cover a good deal if not all of the same time span as did the Phoenician and Palestinian issues.

The format of the following listings is similar to that used above for the Phoenician and Palestinian strikings. All markings are between the cornucopiae and the right fillet, except for the star of coin 13, which is placed between the cornucopiae and the left fillet.

³⁶ Thompson, p. 83. See n. 33, above.

³⁷ Vol. 1, pp. $\rho\xi\beta'$ - $\rho\xi\gamma'$ and Table Γ .

³⁸ See above, pp. 46-47. As elsewhere, no Cypriot gold is known without either disc or calyx on the cornucopiae tip—that is, no gold which can be dated as early as the Group 1 decadrachms of Alexandria.

CITIUM

Corresponding to Group 2

KI	522	FU1	1. Sv. pl. 15, 4
		FU1	2. Münzhandlung Basel 4, 1 Oct. 1935, 982. Dies of 1

Corresponding to Group 3 or 4

Fulmen over K	523	FU2	3. Sv. pl. 15, 5
		FU2	4. <i>MFA Suppl.</i> 321 = Münz. u. Med. 11, 23 Jan. 1953, 86 = <i>Jameson</i> 1810. Dies of 3
		FU2	5. Benha 12. Dies of 3
⌘ over fulmen	—	FU2	6. ANS = Benha 13

PAPHOS

Corresponding to Group 2

Π	520	FU1	7. Sv. pl. 15, 1 ³⁹
		FU1	8. Numismatic Fine Arts 10, 17 Sept. 1981, 254 = Naville 1, 4 Apr. 1921, 3227. Dies of 7

SALAMIS

Corresponding to Group 2

Club over Σ	—	FU1	9. Benha 15 ⁴⁰
Caduceus over Σ	—	FU1	10. Leu 25, 23 Apr. 1980, 199 ⁴¹
ΣA	—	FU1	11. Leu 18, 5 May 1977, 274

³⁹ Sv. pl. 15, 2 (another illustration of Sv. 520) is a coin with calyx ornament, but of such poor style that it must be later than our Groups 3 and 4.

⁴⁰ Brett in publishing the Benha Hoard took the club as the mintmark of Tyre, and the Σ as an alphabetic date, assigning the coin to Tyre in 268 B.C. Such an early date is impossible; and the placement of the date to the right of the cornucopiae, where the Σ is, would be most exceptional (see above, p. 50). The coin's similarity of format to no. 12 makes it virtually certain that it is the letter and not the symbol that is no. 11's mint marking: the coin is of Salamis.

⁴¹ The monogram was read as Σ in the sale catalogue, but it is clearly Ξ. The coin was assigned to the reign of Ptolemy V, but the cornucopiae terminating with the simple disc as ornament places it earlier.

Corresponding to Group 3 or 4

ΣA	521	FD2	12. Sv. pl. 15, 3
Star, ΣA	—	O?U2	13. Benha 11

5. Ptolemy III: Arsinoe Double Octadrachm

This remarkable issue first appeared in 1978⁴² (Plate 10, A). The obverse, with letter A, is handsome and very close indeed to those of our Group 2, where the A octadrachms occur. One subtle but significant feature differs, however. The pronounced fold in the veil at the top of the head, midway between the chignon and the front edge of the veil, is concave *toward the rear*: a seemingly minor feature, but one which is never found on the regular coinage of Arsinoe discussed in this article, although it is standard in Berenice II's portraits (Plate 10, B-C).

The reverse of the double octadrachm, however, provides the surest indications that the coin may not belong with Arsinoe's other obverse-lettered coinage. The treatment of the cornucopiae's tip is unclear (a disc with drooping edges?), but the presence of symbols in the field is unknown in Arsinoe's regular coinage. And the symbols, laurel-wreathed piloi and stars, are precisely those which occur on many of Berenice's coins (Plate 10, B-C). Above all, the fillet on the octadrachm, its two straight ends hanging together to the right of the cornucopiae, is not Arsinoe's but Berenice's (Plate 10, B-C).

The largest known Ptolemaic silver coin, a dodecadrachm of Phoenician weight, bears Berenice's name and portrait; so do the hitherto largest known Ptolemaic gold issues, decadrachms of Attic weight.⁴³ It would seem that this spectacular double octadrachm was later than the early posthumous portrait coinage of Arsinoe discussed in this article, and that it was struck under Ptolemy III.

6. Ptolemy III: "Berenice-type" Arsinoe Octadrachms⁴⁴

This unusual issue of octadrachms (Plate 10, G) has long been accepted as presenting the portrait of Berenice II in the guise of Arsinoe. Svor-

⁴² Leu 20, 25 Apr. 1978, 174, 55.55 g.

⁴³ Silver: Sv. 988; gold: Sv. 972, 986.

⁴⁴ Sv. 1061-62.

nos assigned the issue to Berytus, because of the trident symbol which a few examples bear, but there has been no clear indication of date.

There are also known rare octadrachms in Berenice's name (Plate 10, E) which show a lovely youthful head on obverse, but one which is recognized as merely an idealized Greek head, not a true portrait.⁴⁵ The single cornucopiae on the reverse does not show Berenice's standard cornucopiae contents of, from left to right, 1) grapes, sitting precariously unsupported at the edge of the cornucopiae, 2) pomegranate, 3) pyramidal cake, and 4) oversized grain ear (see Plate 10, B-C). Instead, this issue's reverse is still highly influenced by Arsinoë's cornucopiae contents: it retains the two hanging grape clusters, and the small round fruit to left; and keeps the pomegranate in the right-hand position. Added, however, at the left is the oversized ear of grain which, shifted to the right, becomes an unvarying prominent feature of Berenice's standard cornucopiae contents.⁴⁶

The bee on the reverse has led to an attribution to Ephesus, a city which was reclaimed for Egypt by Ptolemy III in 245 B.C., early in his reign. This time and place would seem a very likely attribution for the striking of this issue, with its Greek-style portrait, perhaps executed before the arrival of any example of Berenice's official portrait, and its only partial change of the cornucopiae contents from Arsinoë's to Berenice's standard assortment.

A new Berenice issue which has just appeared on the market⁴⁷ (Plate 10, F) now makes a rather surprising connection between the early Ephesian Berenice coins (Plate 10, E) and the "Berenice-type" Arsinoë issue (Plate 10, G). The new octadrachm's obverse lacks the stephane (as do the Ephesian coins), but in all other respects is extremely close to that of the "Berenice-type" coins; the lumpy chignon, the arrangement of the veil's folds, the dots along the browline, and one unique, non-natu-

⁴⁵ Sv. 899-900.



⁴⁶ Interestingly enough, Thompson notes (p. 32) that in the contents of the cornucopiae carried by Arsinoë and Berenice on the faience oinochoai, the pyramidal cakes "grow thinner and thinner until in the time of Berenice they are displaced by the long yellow stalks [the oinochoai were painted, of course] which appear to represent grain, though the heads are not represented" Grain was evidently a part of Berenice's official iconography and not of Arsinoë's.


⁴⁷ Leu 30, 28 Apr. 1982, 224.

ralistic detail—the four thin, closely spaced, almost parallel lines which form the lower portion of the veil seen to the right of the neck.

On the new coin's reverse to lower right is what may be a bee symbol, but whether or not this is the correct identification, the cornucopiae's contents and their arrangement are precisely those of the Ephesian issue—and of no others. The new octadrachm would thus seem to suggest that some at least of the "Berenice-type" Arsinoe tetradrachms were struck in Ephesus, and fairly early in Ptolemy III's reign.

7. Ptolemy III: Phoenician and Palestinian Arsinoe Octadrachms of 225/4 B.C.

The monogram  (sometimes ) distinguishes a coherent but rather puzzling group of Ptolemy Soter tetradrachms and Arsinoe octadrachms from the five eastern mints. Svoronos knew silver from Tyre, Sidon, Ace-Ptolemais and Gaza; and gold from Ace-Ptolemais and Joppa.⁴⁸ The coins bear other markings as well, among which appears occasionally the date ΚΓ, and Svoronos's catalogue placed the dated coins in Ptolemy II's twenty-third year, or 263 B.C.; but this early date is quite impossible, and Svoronos's text reveals his serious doubts.⁴⁹

Otto Mørkholm has recently collected and published the silver tetradrachms, including also an issue of Joppa, and shown that all belong to the twenty-third year not of Ptolemy II, but of Ptolemy III, in 225/4 B.C.⁵⁰ To Svoronos's two gold octadrachms of this  group can now be added another issue of Ace-Ptolemais and one of Sidon, all of which would have been struck in this brief unexplained resumption of minting in 225/4 B.C.

Coin 4's obverse is indistinct, but on the other three, while the lotus-head scepter tip is shown atop Arsinoe's head, there is, quite excep-

⁴⁸ Sv. 701–4, 757, 785–87, 794, 821.

⁴⁹ In vol. 1, pp. ροδ' and ροζ'-ροη', he hesitantly assigns the issues to various dates around 263/2 and 261/0 B.C. Earlier, he had evidently not considered them Ptolemy II's at all: in *Τὰ χρυσᾶ νομίσματα τῶν Λαγιδῶν τοῦ τύπου Ἀρσινόης τῆς Φιλαδέλφου*, *JIAN* 3 (1900), he placed the dated Joppa octadrachm on his plate of coins of Ptolemy III and later rulers (pl. Δ, 8: there is no accompanying text).

⁵⁰ O. Mørkholm, "A Group of Ptolemaic Coins from Phoenicia and Palestine," *INJ* 4 (1980), pp. 4–7.

tionally, no depiction of the scepter's shaft: the lines to the right of the neck belong to the veil because, if extended, they lie far to the rear of the scepter tip. The forms of the civic monograms differ from those used earlier, and the placement of the markings is erratic.

The format of the listings below is that used elsewhere in this article. The first marking listed for each coin is placed to the left of the cornucopiae; all others are to the right.

SIDON

☩ ΣΙ — FD2 1. Leu 30, 28 Apr., 1982, 225 (Plate 10, D)

AKE-PTOLEMAIS

☩ ☩ over Ω 785 FD2 2. Sv. pl. 25, 2
 ☩ ☩ — FD2 3. Rollin et Feuarent, 9 May 1910, 675

JOPPA

☩ ☩ over KΓ 794 FD2 4. Sv. pl. 23, 1

8. Ptolemies VI-VIII: Arsinoe Octadrachms with K on Obverse⁵¹

Any lingering belief that these obverse Ks signify dates of any sort should be dispelled by the demonstration that the letters on the early posthumous coins were not dates but simply issue markings. It may well be that tradition required that a "proper" Arsinoe coin have a letter on obverse, but that any letter would do. The K issue was the last large issue in the early posthumous coinage (second only to Θ in the number of reverse dies known); and one suspects that the K on the late coins represents nothing more than successive rote copyings of an earlier K coin.⁵²

⁵¹ Sv. 1241-42, 1374, 1498-99, 1726, 1841. For the attribution to Ptolemies VI and VIII see E. T. Newell, *Two Recent Egyptian Hoards*, ANSNNM 33 (New York, 1927), pp. 16 and 26-27.

⁵² See especially Sv. pl. 40, 23 (an example of Sv. 1242), whose obverse seems a direct copy of the original K die.

KEY TO PLATES

Numbers identify coins in the early posthumous Arsinoe coinage from Alexandria; letters are used for all other coins.

At the bottom of the plates, brackets above coin numbers indicate obverse die links; brackets below, reverse die links.

PLATE 2: Theon Adelphon Octadrachm (A) and Group 1 Decadrachms (1-4)

A. Florange, 10 Feb. 1923, 64

1. Numismatic Fine Arts 8, 6 June 1980, 379 = Schulman, 29 Oct. 1953, 2137
2. New Netherlands-Seaby, 14 Nov. 1973, 25 = Egger 40, 2 May 1912, 1229
3. Naville 13, 27 June 1928, 939
4. Ciani, 18 Dec. 1924, 301 = Bourgey, 7 June 1909, 362

PLATE 3: Group 2 Octadrachms

1. Naville 4, 17 June 1922, 981 = Hirsch 25, 29 Nov. 1909, 3188 = Hamburger, 24 Oct. 1898, 56
2. Sv. pl. 15, 6
3. Bullowa, 12 June 1953, 497
4. Athens = Sv. pl. 15, 7
5. Glasgow = *Hunter*, vol. 3, p. 363, 8 = Sv. pl. 15, 8
6. Stack's, 9 Nov. 1946, 11 = Naville 17, 3 Oct. 1934, 624
7. Naville 7, 23 June 1924, 1833 = Hirsch 21, 16 Nov. 1908, 4483
8. London = Glendining, 18 Apr. 1955, 42 = Münzhandlung Basel 4, 1 Oct. 1935, 979

PLATE 4: Group 2 Decadrachms (1-4) and Tetradrachms (5-6)

1. ANS = Stack's, 20 Jan. 1938, 135 = Naville 12, 18 Oct. 1926, 2594
2. Coins and Antiquities 1972, FPL 2, G151 = Stack's, 20 Jan. 1938, 136 = Naville 13, 27 June 1928, 940.
3. ANS
4. ANS
5. Coin Galleries, 20 Apr. 1961, 163 = Stack's, 4 May 1960, 154 = Stack's, 20 Jan. 1938, 137
6. Glendining, 21 Feb. 1961, 2794 = *SNG Lockett* 3408 = Naville 7, 23 June 1924, 1831 = Egger 40, 2 May 1912, 1228 = Rollin et Feuarent, 9 May 1910, 678

PLATE 5: Group 2 Tetradrachms

1. J. D. Bishop and R. R. Holloway, *Wheaton College Collection of Greek and Roman Coins*, ANSACNAC (New York, 1981), 293 = Stack's, 9 Nov. 1946, 256 = Morgenthau 342, 26 Nov. 1934, 172

2. Münz. u. Med. 54, 26 Oct. 1978, 397
3. Private coll.
4. *SNGBerry* 1473
5. London = *BMC* p. 43, 7 = Sv. pl. 16, 13 (Sv. 410, described as without obverse letter)
6. *ANS* = Hirsch 29, 9 Nov. 1910, 846
7. Kricheldorf *FPL* 11, July-Aug. 1956, 451
8. London = *Weber* 8243 = Sv. pl. 16, 16

PLATE 6: Transitional Octadrachms (1-3) and Decadrachms (4-6)

1. Naville 17, 3 Oct. 1934, 625
2. Naville 17, 3 Oct. 1934, 626
3. Münz. u. Med. 19, 5 June 1959, 581
4. Stack's, 9 Nov. 1946, 255 = Naville 1, 4 Apr. 1921, 3226
5. Stack's, 27 June 1952, 1259 = Cahn 66, 9 May 1930, 470 = Hess, 25 Mar. 1929, 465 = Hamburger, 24 Oct. 1898, 57
6. Hess-Leu, 16 Apr. 1964, 254

PLATE 7: Group 3 Octadrachms (1-4) and Decadrachms (5-7)

1. Vinchon, 23 Apr. 1976, 200
2. Numismatic Fine Arts 8, 6 June 1980, 380 = *MFA Suppl.* 320
3. *ANS*
4. Sotheby, 21 Feb. 1929, 98
5. Naville 15, 2 July 1930, 1174
6. Vinchon, 3 Mar. 1975, 83
7. Glendining, 21 Feb. 1961, 2800 = *SNGLockett* 3415

PLATE 8: Group 4 Octadrachms (1-4) and Decadrachms (5-7)

1. Benha 8
2. Münz. u. Med. 11, 23 Jan. 1953, 88
3. Hess-Leu 28, 5 May 1965, 312 (illustration slightly over-sized)
4. Leu 18, 5 May 1977, 273 = Stack's, 30 Apr. 1964, 24 = Münzhandlung Basel 4, 1 Oct. 1935, 981
5. Stack's, 20 Jan. 1938, 190 = Naville 14, 2 July 1929, 461
6. Leu 7, 9 May 1973, 303 = Bourgey, 23 May 1910, 143
7. *ANS*

PLATE 9: Palestinian and Phoenician Octadrachms

See coin listings, pp. 50-53.

PLATE 10: Miscellaneous Arsinoe (A, D, G) and Berenice II (B, C, E, F) Strikings.

All are octadrachms except A, double octadrachm; B, silver Attic 2 1/2 drachm; and C, gold Attic decadrachm.

- A. Leu 20, 25 Apr. 1978, 174
- B. ANS = Florange, 16 Oct. 1923, 66
- C. Glendining, 21 Feb. 1961, 2801 = *SNG*Lockett 3416
- D. Leu 30, 28 Apr. 1982, 225
- E. Leu 20, 25 Apr. 1978, 175
- F. Leu 30, 28 Apr. 1982, 224
- G. In trade, 1981

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COINAGE OF THE ARMENIAN KINGDOMS OF SOPHENE AND COMMAGENE

(PLATES 11–12)

PAUL Z. BEDOUKIAN

Certain types of coins which have on the obverse a characteristic headdress (called the Armenian tiara by Babelon, Langlois, Blau, and others) were struck in southwestern Armenia during the first three centuries before Christ. Although the existence of these coins has long been known, a systematic study of them has not been made because of the paucity of specimens and the lack of historical evidence for their proper attribution. Recent excavations at Nemroud Dag¹ have shed much light on the history of this region—especially of Sophene and Commagene. In addition, much new material has surfaced, making it now possible to attempt a chronological attribution of the coinage of these two Armenian kingdoms.

Historians have generally acknowledged that Armenian and Greek tribes entered Asia Minor from Europe in the eighth century B.C. and gradually spread eastward toward the highlands of historic Armenia. By the sixth century B.C., Armenians were already settled over the lands of the Urartuan kingdom and were in close contact with the Medes.

During the rise of the Achaemenid empire, Armenia constituted a distinct province governed by satraps. Often these satraps were native rulers who had allied themselves with the Persian kings and partici-

¹ F. K. Dorner and T. Goell, *Arsameia am Nymphaios: Die Ausgrabungen im Hierothesion des Mithridates Kallinikos von 1953–1956* (Berlin, 1963) L. Jalabert and R. Mouterde, *Inscriptions Grecques et Latin de la Syrie* (Paris, 1929), 1, pp. 2–42.

pated in their military expeditions. For example, in the year 612 B.C., an Armenian ruler, Paruir, took part in the sack of Nineveh and was rewarded by being recognized king of Greater Armenia. Several centuries later, King Orontes of Armenia joined the Persian army with a contingent of 40,000 infantrymen and 7,000 horsemen in the battle of Arbela (331 B.C.) which resulted in the total victory of Alexander over Darius. The Orontid kingdom, however, was never conquered by Alexander. Its rulers were descended from the Achaemenid royalty and for a time controlled all of historic Armenia, including Sophene and Commagene.

Sophene, situated between the Euphrates and the Tigris rivers, separated the Hittites from the Urartuans. After Alexander's victory over Darius, it became the first region exposed to Greek influence and adopted some aspects of Greek culture. Around the third century B.C., the Seleucids forced its separation from historic Armenia and allowed it to form an independent kingdom. The rulers of Greater Armenia apparently did not issue coins, but the Armenian kingdom of Sophene, which included Commagene initially, followed the western custom of issuing coinage.

Perhaps the greatest single obstacle in studying the coinage of Sophene and related Armenian principalities has been the prevailing opinion that Sophene and Greater Armenia were governed by the same family of rulers.² Both Toumanoff and Lang presented us with a sequence of rulers of Armenia which included not only the kings of Sophene but also six Orontid kings who ruled over Greater Armenia. Because the names of the rulers of both Sophene and Greater Armenia were mixed together, it was hitherto impossible to correctly attribute the coinage of Armenia from the fifth to the first century B.C.

The excavations of the tumulus of Antiochus Theos of Commagene at the beginning of the twentieth century changed the picture and provided us with much information on the Orontids and on Sophene. They established that Sophene was a distinct and different Armenian kingdom. The recently published Armenian encyclopedia clearly diffe-

² C. Toumanoff, *Studies in Christian Caucasian History* (Washington, 1963), pp. 282, 293-94; David M. Lang, *Armenia, Cradle of Civilization* (London, 1970), p. 121.

rentiates the kingdom of Sophene at the start of the third century B.C. from that of Greater Armenia.³

The inscriptions of Nemroud Dagħ list the ancestors of Antiochus I and connect his lineage with the Orontids of Armenia and the Achaemenid house. They also list the kings of Sophene, who were closely related to the ruling dynasties of Armenia and Persia. We are thus able to study the coinage of Sophene as that of a dynasty separate from Greater Armenia.

It has been noted that Armenians named their cities after the rulers who founded them.⁴ This custom prevailed in Greater Armenia and in Sophene as well. A number of cities around Mount Ararat were named after the Artaxiad kings, and hundreds of miles southwest, we find another set of cities named after the rulers of Sophene.

Our present knowledge and the numismatic material now available make it possible to present the following chronology of the rulers of Sophene and of Commagene and their coinage.

SOPHENE

SAMES (ca. 260 B.C.)

Toumanoff⁵ writes that the city of Samosata was first mentioned in the year 245 B.C. by Erasthenes who stated that Ziaelas of Bythia took refuge in that city in 260 B.C. It seems justifiable to conclude that its founder, Sames, ruled around that time. Although no historical record exists concerning the rule of Sames, his coins were described as early as 1754.⁶ Somewhat later, Belley⁷ gave a fuller description of the

³ *Haikakan Sovetagan Hanrakidaran* [Soviet Armenian Encyclopedia] (Erevan, Arm. S.S.R., 1970), vol. 5, s.v. "Sophene," pp. 139–41 (B. Haroutunian).

⁴ H. A. Manandian, *The Trade and Cities of Armenia in Relation to Ancient World Trade*, trans. Nina G. Garsoian (Lisbon, 1965), e.g. pp. 34 and 37.

⁵ Toumanoff (above, n. 2), p. 280.

⁶ E. Froelich, *Armenia Regum Numismatum*. . . (Vienna, 1754), pp. 89–91.

⁷ L'Abbe Belley, *Mémoires de l'Académie des inscriptions et belles-lettres*, vol. 26 (Paris, 1840), pp. 355, 380.

coins and attributed them to Sames. Subsequently, other numismatists have accepted this attribution.⁸

In his treatise on the coinage of ancient Armenia, Langlois⁹ mentions the single specimen found in the Vienna Museum. Both Langlois and Babelon¹⁰ considered this coin to be Commagenian. This is incorrect because at that time Commagene was part of the kingdom of Sophene, and the coin was issued by Sames of Sophene.

Sames initiated a style of coinage (Plate 11, 1) with the pointed headdress which, as mentioned above, underwent a gradual change and led to the tiara seen on the coins of the Artaxiads of Greater Armenia.¹¹ On the obverse, the king's head is turned right: he is wearing a tall, conical cap with a diadem, ending in a bow in the back and long strands falling down the neck. On the reverse are the names of the king and Thyrses of Dionysos, with interlaced cornucopiae. At least six examples of the coins of Sames have been found in various collections.

ARSAMES I (ca. 240 B.C.)

It is interesting that two cities were named after Arsames, Arsamosata and Arsameia. Dittenberger¹² and Jalabert and Mouterde¹³ examined the chronological sequence of the rulers of this dynasty and reached the conclusion that there were two kings named Arsames. Although Toumanoff¹⁴ disagrees with this conclusion, numismatic evidence (the existence of two types of coins bearing the name Arsames) strongly supports the argument in favor of two rulers named Arsames.

⁸ J. Eckel, *Catalogue du Musée de Vienne*, p. 252; T. E. Mionnet, *Descriptions des médailles antiques, grecques et romaines*, vol. 4 (1807), p. 454; E. Q. Visconti, *Iconographie Ancienne, Iconographie Grecque*, vol. 2 (Paris, 1811), pp. 345-64.

⁹ V. Langlois, *Numismatique de l'Arménie dans l'Antiquité* (Paris, 1859), p. 9.

¹⁰ E. Babelon, *Rois de Syrie, d'Arménie et de Commagène* (Paris, 1890), p. ccviii.

¹¹ P. Z. Bedoukian, *Coinage of the Artaxiads of Armenia*, RNS Special Publication 10 (London, 1978), p. 4.

¹² W. Dittenberger, *Orientalis graeci inscriptiones selectae* 1 (Leipzig, 1903), p. 611.

¹³ L. Jalabert and R. Mouterde, *Inscriptions Grecques et Latines de la Syrie* (Paris, 1929), p. 28.

¹⁴ Toumanoff (above, n. 2), p. 281.

Some Arsames coins (Plate 11, 2-4), the obverses of which are remarkably similar to those of Sames, certainly belong to the first Arsames. On the reverse is a horseman galloping right, holding a spear in his right hand. A figure in front of the horse may represent a foot soldier. This reverse type appears on a coin that Mørholm¹⁵ attributed to Ariarathes III of Cappadocia who ruled in that period. A variant of the reverse has two foot soldiers facing the armed horseman and a fallen soldier beneath the horse's feet. Two denominations of this coin were struck.

ARSAMES II (ca. 230 B.C.)

Arsames II is reported to have offered asylum to Antiochus Hierax, the viceroy of Asia Minor and brother of Seleucus II. Antiochus, by setting himself up as an independent king, had incurred the wrath of his brother. The obverse design on the coins of Arsames II is different from that of the preceding king. Instead of being conical, the tiara now resembles a cap and does not have the sharp point (Plate 11, 5-8). It sits lightly on the head with the diadem circling the forehead and ending in a bow in the back, then hanging down the neck. On the reverse of the large coppers, under the legend, is a horseman with a cap and floating robes, holding a spear in his right hand, galloping to the right. The larger copper coins of Arsames II have been described by Visconti, Langlois, Babelon¹⁶ and others.

The obverse of the smaller copper coins is identical to the large coppers, with the head of the king turned right and the same type of tiara. There are a number of variations in the reverse design, however, perhaps suggesting that this king ruled over a longer period than his predecessor. On one type is a nude figure, standing and facing, with the right arm extended from the elbow, the left holding a club. A second type shows an eagle turned left holding a bolt of lightning. The third

¹⁵ O. Mørholm, "The Classification of Cappadocian Coins," *NC* 1969, p. 22, pl. 5.

¹⁶ Visconti (above, n. 8), pp. 345-64; Langlois (above, n. 9), p. 12; Babelon (above, n. 10), p. 211.

type shows the caps of dioscouri along with the legend found on the others.¹⁷

XERXES (ca. 220 B.C.)

Xerxes was the son of Arsames and succeeded his father to the throne. A passage from Polybius¹⁸ sheds considerable light on the events during his rule. It appears that Antiochus IV Epiphanes resolved to subdue Sophene and besieged Xerxes in his city of Arsamosata. Unable to resist such a powerful adversary, Xerxes sued for peace. It was granted on condition that he pay the tribute owed to Antiochus by Arsames. The payment is said to have consisted of 300 talents, 1,000 horses, and 1,000 mules with their harnesses. As a gesture of amity, Antiochus gave his sister in marriage to Xerxes.

The Nemroud Dagh inscriptions do not list Xerxes as one of the ancestors of Antiochus I of Commagene. However, as Toumanoff¹⁹ has pointed out, not all the inscriptions have survived. The existence of coinage issued by Xerxes is ample proof that he was a ruler of this dynasty. Moreover, judging from the fabric and style of his coins, he was either the son or the successor of Arsames II.

The coinage of Xerxes (Plate 11, 9–10, 13–14; Plate 12, 15) shows the continued evolution in the design of the headdress of the kings of Sophene. The cap-like headdress is placed lightly on the head, with the diadem around the head and hanging in the back. The coins of Xerxes show the tiara folded, and open on the side. Unlike his predecessor, the king is heavily bearded, but as on all the coins of this dynasty, he is facing right. Several types of coins, in two denominations, are known to have been struck by Xerxes.

The earliest example of a chalcus of this king was described by Froehlich²⁰ and later, by Langlois, Babelon and other writers. On the reverse of this coin is a representation of victory standing left, holding a crown or wreath in her extended right arm, with the left hand resting

¹⁷ NFA 10, 17 Sept. 1981, 227–28.

¹⁸ Polybius, 8.23.

¹⁹ Toumanoff (above, n. 2), p. 283.

²⁰ E. Froelich (above, n. 6), pp. 91–100.

on the belt of her tunic. Other examples show Athena holding the crown and resting her left arm on a shield. Zeus appears on the reverse of a third variety, seated, holding Nike in his right hand, the left resting on a shield.

ABDISSARES (ca. 210 B.C.)

No information has survived from early historians to establish the genealogical position of this king. However, the striking similarity of his coins (Plate 12, 16–17) to those of Xerxes leaves little doubt that Abdissares was his successor. On the obverse, the king is turned right and is lightly bearded. The reverse of the larger coppers shows an eagle standing right. A similar eagle appears on the smaller versions of this coin. A horse's head, turned right, is on a second variety of the smaller denomination.

Visconti²¹ was apparently the first to note the similarity between the coins of this king and those of Xerxes and to conclude that they belonged to a king of Arsamosata. Subsequently, de Saulcy²² published an article on the coinage of Abdissares. Other numismatists, including Langlois²³ and Babelon²⁴ mentioned the existence of several types of coins struck by this king.

ZARIADRES (ca. 190 B.C.)

It appears that the Seleucids had extended their power over Sophene at the beginning of the third century B.C. and had appointed Zariadres (Zareh) as the strategus of Sophene. In the battle of Magnesia (189 B.C.), the Romans crushed the power of the Seleucids. Taking advantage of the situation, Zariadres declared his independence and was later recognized as king by Rome. It is interesting that the strategus

²¹ Visconti (above, n. 8), p. 329.

²² M. de Saulcy, *Bulletin archéologique de l'Athenaeum français* (1855), no. 12, p. 101.

²³ Langlois (above, n. 9), pp. 15–18.

²⁴ Babelon (above, n. 10), p. cxciv.

of Greater Armenia, Artaxias, likewise declared his independence and established the Artaxiad dynasty.

These events have been described in some detail by Strabo.²⁵ Strabo made a significant remark to the effect that the political situation resulted in the formation of two independent countries whose people spoke the same language. Historians made the same statement a hundred years later when Tigranes the Great joined Sophene and adjacent lands to his empire. There seems to be no doubt that both Sophene and Commagene at that time were inhabited by Armenian people.

Friedlander²⁶ was the first to describe a coin with the legend ΔΣΑΠΙ (Plate 12, 18) which he attributed to a ruler in Armenia. Blau,²⁷ in discussing the coin in the Berlin Museum, attributed it to Zariadres of Sophene. His views were shared by Babelon; however, Regling considers this coin an issue of Anissa.²⁸

Strabo indicated that Zariadres controlled territories beyond Sophene. Perhaps the establishment of a new realm justified a change from the type of coinage issued by the preceding kings of Sophene. On the obverse, we again see the king's head turned right, wearing a tiara. The headdress, however, is somewhat different, with the flaps under the chin. The different styling of the reverse prompted Babelon to suggest the possibility that this coin was struck outside of Sophene. On the reverse is a deity (Anaitis?) facing, with the right hand raised and holding a flower. At her feet are two sphinxes back to back and facing.

MORPHILIG (ca. 150 B.C.)

Friedlander²⁹ described a coin similar to that of Zariadres in the Berlin Museum, with a deity (Anaitis) standing, holding a flower. The letters ΜΟΠΙ can be expanded to ΜΟΠΙΦΙΛΙΟΣ, as there is no space on the flan for the entire name.

²⁵ Strabo 11. 14. 5, 15.

²⁶ J. Friedlander, "Satrapenmünzen," *Z/N* 4 (1877), pp. 266-67.

²⁷ O. Blau, "Die Herron von Sophene und deren Münzen," *NZ* 9 (1877), p. 104.

²⁸ Babelon (above, n. 10), p. cxcviii; K. Regling, "Dynastienmünzen von Tyana, Morima und Asisa in Kappadokien," *Z/N* 1932, p. 10, no. 11 (Berlin).

²⁹ J. Friedlander (above, n. 26), pp. 266-67.

Morphilig and Zariadres fit into the historical frame of the period. The headdress design on the coins of both kings bears marked similarities to that on the contemporary coins of Cappadocia.

ARTANES (ca. 110 B.C.)

According to Strabo,³⁰ Artanes, a descendant of Zariadres, was the last king of Sophene. He lost his kingdom in 95 B.C. No coins bearing his name are extant. The discovery of such a coin would do much to clarify the end of the coinage of the Sophene dynasty. There exists the possibility that a coin mentioned by LeRider with the incomplete legend ...ABANOY (Artabanus?) belongs to this king.³¹

ARSACES (ca. 90 B.C.)

On the evidence that Tigranes, upon adding Sophene to his empire, placed a certain Arsaces as governor of that region, de Sallet³² suggested that certain coins with the legend ΒΑΣΙΛΕΥΣ/ΑΡΣΑΚΟΥ be attributed to this viceroy.

When Pompey in 69 B.C. signed a peace treaty with Tigranes the Great, he gave Sophene to Ariobarzanes of Cappadocia. As a result, this territory gradually became hellenized and became part of the Roman empire.

COMMAGENE

It was mentioned above that the Seleucids succeeded in detaching Sophene from Greater Armenia and allowed it to become an independent kingdom. This action probably secured the northern mountainous

³⁰ Above, n. 25.

³¹ G. Le Rider, "Monnaies grecques acquises par le Cabinet des Médailles en 1959," *RN* 1959-1960, p. 21, no. 28 (Paris).

³² A. de Sallet, "Die ältesten Tetradrachmen der Arsaciden," *Z/N* 1 (1874), p. 312; see also P. Cl. Sibillan, "Drei sehr seltene Münzen armenischer Dynasten," *NZ* 2 (1870), pl. 8, 3.

frontier and at the same time placed the territory, through which passed a major trade route, under the control of the Seleucids. Later, through the intervention of the Seleucids, Commagene detached itself from Sophene and also became an independent kingdom. The circumstances are not clear, but Diodores of Sicily stated that around 163 B.C., Ptolomaeus, the satrap of Commagene, declared his independence and even captured Melitene from the king of Cappadocia.³³

Numismatists, in discussing the coinage of Commagene, have not considered this country as part of the Armenian kingdom. Historical evidence, however, shows clearly that its language and population was Armenian. It was, in effect, an Armenian kingdom separated from Greater Armenia for political reasons. It lost its connection with Armenia some one hundred fifty years later.

PTOLOMAEUS (ca. 163 B.C.)

We do not have any coins bearing the name of this ruler, which is a little surprising, as one would expect that a ruler beginning a dynasty would have taken pains to issue coins in his name.

MITHRADATES I CALLINICUS (96–70 B.C.)

Several coins (Plate 12, 20–21, 23) have been attributed to this king. It is curious that he ruled during the period when Tigranes had gained control of both Sophene and Commagene. It may be that Mithradates was allowed to strike coins even though he recognized the overlordship of Tigranes. The same situation seems to have occurred with his successor, Antiochus.

A few coins of Callinicus are similar to the ones issued by the kings of Sophene, portraying on the obverse the king's head with the pointed Armenian tiara. Three examples have been described in the literature by Babelon and Troxell.³⁴ On one type, Athena is standing left with

³³ Toumanoff (above, n. 2), pp. 281–82; E. Honigmann, *Kommagene*, pp. 980, 983.

³⁴ Babelon (above, n. 10), p. 217, pl. 30, 2–4; H. Troxell, "Greek Accessions, Asia Minor to India," *ANSMN* 22 (1977), pp. 21–22, pl. 4, 8–10.

extended right hand, the left supporting a spear, with a shield at her feet. A second type attributed to this king shows on the reverse Pegasus with curled wing. The legend is incomplete. Troxell has attributed to Callinicus a third type with Pegasus on the reverse.

Other coins with the inscription ΒΑΣΙΛΕΩΣ/ΜΙΘΡΙΔΑΤΟΥ which do not portray the king on the obverse must be attributed to Callinicus. The obverse shows an eagle turned right with a palm branch under its left wing. This may represent the coat of arms of Tigranes who had extended his power over Commagene. On the reverse is the king's name, ΚΑΛΛΙΝΙΚΟΥ, with a palm branch upwards to right. The obverse of another example has an eagle and a winged caduceus. and its reverse has the legend ΒΑΣΙΛΕΩΣ/ΜΙΘΡΑΔΑΤΟΥ/ΚΑΛΛΙΝΙΚΟΥ. A fourth class of coins shows the king with a pointed tiara on the obverse and Pegasus on the reverse. The legends are unclear or missing.

ANTIOCHUS I THEOS (60–34 B.C.)

The accepted date for the beginning of the reign of this king coincides with the defeat of Tigranes at the hands of Pompey. For some reason, the few coins of Antiochus I which have reached us (Plate 12, 25, 27) bear on the obverse the portrait of the king wearing a tiara identical with the tiara seen on the coins of Tigranes.³⁵ This has prompted some discussion.³⁶ Were these coins struck for some years before the defeat of Tigranes, indicating the peaceful acceptance of the suzerainty of Tigranes by Antiochus, or were they struck after Tigranes lost control over Commagene? If the latter is true, then Antiochus must have adopted the Armenian tiara to stress the legitimacy of his succession as a descendant of the Armenian Orontid house which in turn was related to the Achaemenid house. The answer to these questions must be left to the historians, but it is clear that Antiochus, by placing the Armenian tiara on his coins, was either declaring himself to be a vassal

³⁵ *BMCCappadocia*, p. 102, pl. 14, 4.

³⁶ P. Z. Bedoukian, "A Coin of Tigranes the Great of Armenia, Struck in Commagene," *NC* 1970, pp. 19–22; R. D. Sullivan, "Diadochic Coinage in Commagene after Tigranes the Great," *NC* 1973, pp. 18–39.

of Tigranes the Great or was claiming that he had the same dynastic lineage as Tigranes.

In any event, after Antiochus, Commagene became a Roman province and the coins of the succeeding kings are entirely different in style and fabric. They are in effect Roman coins, indicating the termination of Commagene as an Armenian state.

Until recently only one type of coin of Antiochus I Theos was known. On the obverse is the portrait of the king wearing the Armenian tiara, and on the reverse, the lion of Commagene walking right, with the legend ΒΑΣΙΛΕΥΣ/ΑΝΤΙΟΧΟΥ. Recently the author acquired a second type of copper (Plate 12, 26) struck by this king, which appears to be overstruck on an unidentifiable coin. On the obverse is the familiar youthful portrait of the king turned right. On the reverse is an eagle, standing right on a branch with the legend ΒΑΣΙΛΕΥΣ/ΑΝΤΙΟΧΟΥ.

SOPHENE

SAMES (ca. 260 B.C.)

Two Chalci

1. *Obv.*: Head of Sames r. wearing pointed tiara with ends of diadem hanging at back of neck; behind head, a laurel branch; border of dots.
- Rev.*: Thyrsos of Dionysos, between two cornucopiae interlaced; to l. upward ΒΑΣΙΛΕΥΣ/ΣΑΜΟΥ; to r. upward ΘΕΟΣΕΒΟΥΣ/ΚΑΙΦΙΚΑΙΟΥ.

Bibliothèque Nationale, 4.80 g, 4.15 g; Paul Bedoukian, 7.69 g, 7.56 g (Plate 11, 1); Hunterian Museum, one specimen; Mechitarian Museum, Vienna, one specimen; Hermitage, 6.14 g.

ARSAMES I (ca. 240 B.C.)

Two chalci

2. *Obv.*: Head of Arsames r. wearing pointed tiara with drapes covering neck.

Rev.: Horseman advancing r. with spear in r. hand and pointed at foot soldier or soldiers facing him with shield and spear; sometimes below horse, a fallen soldier; above horseman **ΒΑΣΙΛΕΩΣ/ΑΡΣΑΜΟΥ**.

Paul Bedoukian, 6.45 g (Plate 11, 2a), 5.87 g (Plate 11, 2b); British Museum, 4.51 g; Jack Guevrekian, 4.25 g.

One chalcus

3. **Obv.:** As 2.

Rev.: As 2.

Paul Bedoukian, 3.18 g, 2.92 g (Plate 11, 3).

4. **Obv.:** As 2.

Rev.: Winged thunderbolt; to l. upward **ΒΑΣΙΛΕΩΣ/ΑΡΣΑΜΟΥ**; to r. uncertain.

American Numismatic Society, 3.61 g (Plate 11, 4).

ARSAMES II (CA. 230 B.C.)

Two chalci

5. **Obv.:** Head of king r. wearing tiara with flat top like a cap; a diadem encircles the head, ends in bow, and hangs down neck.

Rev.: Horseman advancing r. holding spear in r. hand and wearing similar headdress; above horseman **ΒΑΣΙΛΕΩΣ/ΑΡΣΑΜΟΥ**.

Paul Bedoukian, 8.35 g (Plate 11, 5); Bibliothèque Nationale, 6.59 g; Mechitarian Museum, Vienna, one specimen.

6. **Obv.:** As 5.

Rev.: Nude figure standing and facing, r. arm extended from elbow and l. arm holding long club; to r. downward **ΒΑΣΙΛΕΩΣ**; to l. downward **ΑΡΣΑΜΟΥ**.

Paul Bedoukian, 6.41 g, 5.37 g (Plate 11, 6); Jack Guevrekian, 7.68 g; British Museum, three specimens.

One chalcus

7. **Obv.:** As 5.

Rev.: Eagle standing r. holding thunderbolt; legends as 6.

Paul Bedoukian, 5.27 g (Plate 11, 7), 3.87 g; Mechitarian Museum, Vienna, one specimen.

8. *Obv.*: As 5.

Rev.: Caps of dioscurei; legends as 6.

Paul Bedoukian, 3.25 g (Plate 11, 8).

XERXES (CA. 220 B.C.)

Two chalci

9. *Obv.*: Bearded head of king r. wearing folded tiara; diademed with ribbon hanging behind head; in l. field, monogram X .

Rev.: Victory standing l. holding crown in extended r. hand, l. hand resting on belt of tunic; in field monogram N ; to r. downward BAΣΙΛΕΩΣ ; to l. downward XEPXOY .

Paul Bedoukian, 5.43 g (Plate 11, 9); Bibliothèque Nationale, 5.42 g; Berlin Museum, 4.97 g; Mechitarian Museum, Vienna, one specimen.

10. *Obv.*: As 9, no monogram.

Rev.: Athena seated holding a figure (Minerva?) in extended r. hand; l. hand resting on large shield; legends as 9, no monogram.

British Museum, 4.51 g (Plate 11, 10).

One chalcus

11. *Obv.*: As 10.

Rev.: As 9, monogram H.

Bibliothèque Nationale, 1.90 g.

12. *Obv.*: As 11.

Rev.: As 9, monogram Z.

Rollin collection (see Langlois).

13. *Obv.*: As 11.

Rev.: As 9, monogram N.

British Museum, 1.89 g (Plate 11, 13).

14. *Obv.*: As 9.

Rev.: As 10.

Bibliothèque Nationale, 1.90 g (Plate 11, 14) Hermitage Museum, one specimen.

15. *Obv.*: As 9.

Rev.: Athena standing l. holding crown in extended r. hand and resting l. arm on shield.

Bibliothèque Nationale, 2.52 g (Plate 12, 15); Mechitarian Museum, Vienna, one specimen; Hermitage Museum, one specimen.

ABDISSARES (CA. 210 B.C.)

Two chalci

16. *Obv.*: Head of king r., lightly bearded, wearing folded tiara; diademed, with, ribbon hanging behind head; beaded border.

Rev.: Eagle standing r; to r. downward ΒΑΣΙΛΕΩΣ; to l. downward ΑΒΔΙΣΣΑΡΟΥ.

American Numismatic Society, 6.73; Paul Bedoukian, 5.71 g (Plate 12, 16a); Bibliothèque Nationale, 7.40 g; Berlin Museum, 9.44 g (Plate 12, 16b), 7.25 g; Jack Guevrekian, 7.77 g.

One chalcus

17. *Obv.*: As 16.

Rev.: As 16.

American Numismatic Society, 2.18 g; British Museum, 2.99 g (Plate 12, 17); Bibliothèque Nationale, 2.15 g, 1.85 g; Mechitarian Museum, Vienna, one specimen.

ZARIADRES (CA. 190 B.C.)

18. *Obv.*: Head of king r., wearing a tiara with flaps tied under chin.

Rev.: Deity (Anaitis?) standing facing; r. hand raised, holding

flowers: at feet two sphinxes, seated, back to back and facing; to r. downward $\text{ANIS\AA}/\Delta\Omega$; to l. downward $\Delta\Sigma\text{API}$.

British Museum, 5.42 g (Plate 12, 18); Berlin Museum, one specimen.

MORPHILIG (CA. 150 B.C.)

19. *Obv.*: Head of king turned r., wearing pointed tiara with flaps tied under chin.

Rev.: Deity (Anaitis?) standing; to r. downward $\Delta\Sigma\text{API}$ [$\text{A}\Delta\text{PIO}\Sigma$]; below deity $\text{MOP}[\Phi\text{I}\Lambda\text{IO}\Sigma]$.

Berlin Museum, one specimen.

ARTANES (CA. 70 B.C.)

No known coins.

ARSACES (after 70 B.C.)

No known coins, but see A. de Sallet, "Die ältesten Tetrachmen der Arsaciden, *ZfN* 1 (1874), p. 312, and P. Cl. Sibilian, "Drei sehr seltene Münzen armenischer Dynasten," *NZ* 2 (1870), pl. 8, 3.

COMMAGENE

PTOLOMAEUS (ca. 163 B.C.)

No known coins.

MITHRIDATES CALLINICUS (96–70 B.C.)

Two chalci

20. *Obv.*: Head of Mithridates r., beardless, wearing pointed tiara with flaps down and behind neck.

Rev.: Athena wearing helmet and long chiton, standing l.; r. hand extended while l. hand supports spear; large shield rests at her feet; to r. downward ΒΑΣΙΛΕΩΣ; to l. downward, ΜΙΘΡΑΔΑΤΟΥ/ΚΑΛΛΙΝΙΚΟΥ.

American Numismatic Society, 8.47 g; Bibliothèque Nationale, 6.55 g; Hunterian Museum, 7.52 g; Paul Bedoukian, 5.72 g (Plate 12, 20), 5.56 g, 5.53 g, 5.49 g, 5.41 g, 5.33 g.

One chalcus

21. *Obv.*: As 20.

Rev.: As 20.

Paul Bedoukian, 4.54 g (Plate 12, 21); Berlin Museum, 4.77 g; British Museum, 3.88 g.

22. *Obv.*: Head of king r. wearing tall pointed tiara, with ties ending in bow at back of head and long strands falling down over back of neck.

Rev.: Pegasus with curved wings l.; below, sword; above ΒΑΣΙΛΕΩΣ; below ΜΙΘΡΑΔΑΤΟΥ.

American Numismatic Society, 3.47 g (Plate 12, 22).

23. *Obv.*: Eagle turned r. and holding palm branch under left wing.

Rev.: Palm branch upward and curving right; to l. upward ΒΑΣΙΛΕΩΣ/ΜΙΘΡΑΔΑΤΟΥ; to r. upward ΚΑΛΛΙΝΙΚΟΥ.

Bibliothèque Nationale, 3.85 g, 3.39 g; British Museum, 4.52 g (Plate 12, 23).

24. *Obv.*: As 23.

Rev.: Winged caduceus; to r. downward ΒΑΣΙΛΕΩΣ; to l. downward ΜΙΘΡΑΔΑΤΟΥ/ΚΑΛΛΙΝΙΚΟΥ.

American Numismatic Society, 4.51 g (Plate 12, 24); Bibliothèque Nationale, 3.95 g.

ANTIOCHUS THEOS (69–34 B.C.)

Two chalci

25. *Obv.*: Head of beardless king r. wearing tiara of Tigranes the Great, having eight pointed star and eagles back to back facing.

Rev.: Lion walking r.; above ΒΑΣΙΛΕΥΣ; below ANTIOXOY.

Paul Bedoukian, 7.55 g, 7.26 g, 6.52 g, 5.88 g (Plate 12, 25), 5.55 g; British Museum, one specimen.

26. *Obv.*: As 25.

Rev.: Eagle standing on branch r.; legends as 25.

Paul Bedoukian 6.00 g (Plate 12, 26).

One chalcus

27. *Obv.*: As 25.

Rev.: As 25.

Paul Bedoukian, 2.95 g, 2.93 g (Plate 12, 27).

THE AUTONOMOUS TETRADRACHMS OF LAODICEA AD MARE

(PLATES 13–19)

OTTO MØRKHOLM

Laodicea ad Mare was founded by Seleucus I at the beginning of the third century B.C.¹ It soon became an important seaport, and a Seleucid mint was operating there down to about 200 when it was closed during the reign of Antiochus III.² In the second century so-called municipal bronze coins were struck under Antiochus IV (175–164) and Alexander Balas (150–145),³ but apart from these few issues the mint was apparently idle.

Toward the end of the second century a number of cities in the Seleucid empire acquired their independence. Their autonomy was generally celebrated by the issue of civic silver coins. In 109/8 Seleucia Pieria was declared free, and soon her autonomous tetradrachms, struck on the Aradian standard, became an important part of the monetary circulation in northern Syria. With the accession of Tigranes to the Seleucid throne in 82 B.C., Seleucia, in determined opposition to the new king, lost most of her economic importance. Her silver coinage came to an

¹ Together with Antioch, Seleucia and Apamea it formed the famous Syrian tetrapolis. On the foundation by Seleucus I, who named the city after his mother, see Strabo 16.2.4 (C 750). Cf. V. Tscherikower, *Die hellenistischen Städtegründungen*, *Philologus*, suppl. 19 (1927), p. 62.

² For the Seleucid coinage down to Antiochus III, see E. T. Newell, *WSM*, pp. 180–91, with the additions in the second edition, pp. vi–vii.

³ *BMCSeleucids* p. 41, 82, and p. 57, 66–67, all with Poseidon as reverse type.

end, and Laodicea, favored by a grant of autonomy from Tigranes, eagerly assumed the function as the most important seaport on the Syrian coast, a position which she (under the name of Latakia) has preserved to the present day.⁴

THE TYPES

As was the case with other cities, autonomy (granted most probably in 81/0 (below, n. 12), soon led to the production of civic tetradrachms. The types were the same throughout the period of minting.

Obv. Bust of Tyche r., wearing turreted crown and veil; fillet border.

Rev. Zeus seated l. on throne, holding on extended r. hand Nike who offers him a wreath; the whole within laurel wreath.

The obverse type, the turreted bust of Tyche, is common to the autonomous city coinages of this region. It first appeared on the issues of Aradus from 138/7 and, undoubtedly influenced by the prolific coinage of this city, the bust of Tyche was adopted by Seleucia Pieria and Laodicea as well as the two small Cilician mints of Aegeae and Elaeusa for their issues of civic tetradrachms.⁵ However, while the obverse was encircled by a line of dots at Aradus, the other mints used the Seleucid fillet border.

The reverse type of the seated Zeus Nicephorus is more surprising. During the second century Poseidon seems to have been the main god of Laodicea (see n. 3). As far as I can see, the choice of Zeus for the reverse was influenced by the contemporary coinage of the Syrian

⁴ On the vicissitudes of Seleucia and Laodicea during this period, see H. Seyrig, "Sur les ères de quelques villes de Syrie," *Antiquités syriennes* 4 (1953), no. 42 (= *Syria* 27 [1950]), pp. 92-98 (hereafter, Seyrig, "Ères").

⁵ For the common issues of Aradus and Seleucia see, for instance, the relevant volumes of *BMC*. The four known tetradrachms of Aegeae are listed by H. Bloesch, "Tetradrachms of Aegeae (Cilicia)," *Essays Thompson* (Wetteren, 1979), pp. 1-7; on p. 2 with n. 2, mention is made of the three known specimens from Elaeusa.

capital, Antioch on the Orontes. Here the seated Zeus became the constant reverse type on the royal and pseudo-royal silver coinage since ca. 105.⁶ He also occupied the reverse on most of the local Antiochene bronzes, issued from 92/1 onwards. The laurel wreath surrounding the type and inscription is again derived from the royal issues of Antioch, where it had been a permanent feature since 121/0. The same device was used at Aradus (in imitation of Antiochus VII?), Seleucia, and the two Cilician mints.

INSCRIPTIONS

The main inscription on the tetradrachms of Laodicea appears on the reverse in two lines and in three different forms:

- a. ΛΑΟΔΙΚΕΩΝ/ΤΗΣ ΙΕΡΑΣ; to l., ΑΥΤΟΝΟΜΟΥ
- b. ΛΑΟΔΙΚΕΩΝ/ΤΩΝ ΠΡΟΣ; to l., ΘΑΛΑΣΣΗ
- c. 'ΟΥΛΙΕΩΝ/ΤΩΝ ΚΑΙ; to l., ΛΑΟΔΙΚΕΩΝ.

The first form of the inscription, with the epithets "sacred" and "autonomous" added to the name of the citizen body, is not special to Laodicea. A similar formula occurs on the silver tetradrachms of Seleucia Pieria, Tripolis and Elaeusa, issued between 105 and 65. It also occurs on bronzes of the first century from Aegeae and Mopsus in Cilicia and Apamea in Syria. The Aradians placed only their own name on their silver, while the southern Phoenician cities of Tyre and Sidon preferred the adjectives "sacred" and "inviolable," ΙΕΡΑΣ ΚΑΙ ΑΣΥΛΟΥ.⁷ Our formula thus seems to occur within a limited geographical area comprising the former Seleucid districts of Syria and Cilicia.

The second inscription is more neutral, providing only the geographical information necessary to distinguish this Laodicea from the other

⁶ E. T. Newell, *The Seleucid Mint of Antioch* (New York, 1918), p. 105, nos. 405 ff. For the dating of the beginning of Antiochus VIII's fourth series to ca. 105 instead of 108 see H. Seyrig, *Trésors du Levant anciens et nouveaux* (Paris, 1973), p. 102.

⁷ On the meaning of this formula, see H. Seyrig, "Les rois Séleucides et la concession de l'asylie," *Antiquités syriennes* 3 (1946) (= *Syria* 20, 1939), pp. 1-5.

Seleucid foundations of the same name.⁸ The third inscription refers to an important event in the history of the city, its refoundation by Caesar in 47 under the new name of Julia-Laodicea. This great honor was to a certain degree neutralized by the fact that from this time all reference to the city's autonomy disappears from its coinage.

CONTROL MARKS

The issues were also differentiated by control marks and dates. The control marks commonly found on Hellenistic coins, consisting of monograms, initials or small symbols, served to identify the officials responsible for the various issues.⁹ At Laodicea two or three different persons were involved. Ordinarily officials placed their mark below the throne, but sometimes (when more than one was active) also in the left field. The letters in the exergue seem to have a somewhat different function. Some of them can be followed over many years—KA for instance from year 11 to year 31, and ΣΕ from year 12 to year 30—while the most frequent monogram placed under the throne, Α, only occurs from year 11 to year 17. An explanation might be that the place under the throne was used by ordinary mint officials, while the exergue was reserved for a kind of shop or officina designation, the administrative subdivision of the mint being represented by its head of staff.¹⁰ The number of subdivisions might change according to the

⁸ This was the inscription on the municipal bronzes of the second century (above, n. 3).

⁹ Recent attempts at reading another meaning into these marks are not convincing. Identifications with historical persons are, as a rule, quite arbitrary, and the theory of Thomas Fischer, "Johannes Hyrkan I auf Tetradrachmen Antiochos' VII?" *Zeitschrift des Deutschen Palästina-Vereins* 91 (1975), p. 195, that the monograms might indicate the source of the bullion or payments of taxes from individuals and communities ("Die Beizeichen der hellenistischen Münzen könnten m. E. die Herkunft des Silbers bzw. der Prägung angeben, ob es sich um eine Liturgie, einen Tribut oder sonst eine Zahlung einer Person oder Gemeinde handelt") is quite unacceptable as a general principle.

¹⁰ A division into officinae has been suspected at Aradus. See G. F. Hill in *BMC-Phoenicia*, pp. xxxiii–xxxiv, and H. Seyrig, *Notes on Syrian Coins*, ANSNNM 119 (1950), p. 23.

needs of production. For most of the period between years 12 and 31 of the first era two officinae were used, but in years 17, 23, 24 and 31 their number was increased to three. Even in these cases, however, the whole production was controlled by one official, who placed his monogram below the throne. In favor of the officina theory we might add that the obverse dies tend to stay within one officina. Exceptions are few (obverse dies 19, used with KA and ΣΕ; 21, with ΙΩ and ΣΕ; and 22, occurring with KA and ΝΙ). At the beginning, the different style of the obverse dies suggests that each officina used its own die engraver. Thus one engraver produced obverse dies 7, 11, and 13, all used exclusively with KA (see Plates 14, 8–11, and 15, 15–17), while dies 9, 10, and 12, showing a quite different style, appear at the ΣΕ officina (Plate 14, 12–14). It is only with the increased production during year 17 that this distinction breaks down. Obverse die 14 (Plate 15, 18) is of typical ΣΕ style, but was nevertheless used by the KA officina.

THE DATES

In the left field of the reverse are one or two letters used as numerals. They are commonly assumed to indicate years reckoned by a civic era, and, in view of the predilection throughout the Syro-Phoenician region for dating the various coin issues during the hellenistic period, this seems a priori the most likely explanation.

However, it soon appears that two different eras were used. The tetradrachms with inscription *a* show the dates 1, 4, 6–7, 10–13, 15–18, 20, 23–27, 30–31 and 33. The few tetradrachms with inscription *b* are all dated to year 1, and the issues with the third form of inscription carry the numerals 2–3, 5, 9, 18–19 and 29–32. This last series is the easiest to deal with. The coin legend shows, by the title ΙΟΥΛΙΕΩΝ, that the coins must be dated by a Caesarian era, and an inscription of A.D. 221 provides evidence that the era started in the year 48/7.¹¹

¹¹ *IGLS* 4 (1955), pp. 26–29, no. 1265. Cf. Seyrig, "Ères," p. 93, with n. 1 (wrongly giving the date of the inscription as A.D. 211).

Consequently the coins with inscription *c* can be securely dated between 47/6 (year 2) and 17/6 (year 32).

The other era used has been identified by H. Seyrig with an era of independence, starting in 82/1 or, more probably, in 81/0, reckoning backward from the introduction of the Caesarian era.¹² In this paper the first year of the civic era has been equated with 81/0 and the following dates read accordingly, but it should be noted that in theory these dates may all be a year too late, although I find it rather unlikely.

A problem is left regarding the coins dated year 1. They show two different forms of inscriptions (*a* and *b*), and might be thought to belong to the very beginning of the series, 81/0. However, their officina designation and other control marks clearly relate them to the coins inscribed Julia-Laodicea (legend *c*). Moreover, one obverse die (no. 26) was carried over from year 1 (issue 21a) to the issues with legend *c*, dated years 2–9, showing beyond any doubt that this first year also belongs to the Caesarian era and must be equated with 48/7. We thus get the following progression. After the news of the battle of Pharsalus (June 48) had reached Syria, the old civic era of Laodicea was replaced by the Caesarian. At some point during the troubled year 48/7, doubt about the autonomous status of the city under the new political circumstances was apparently raised, resulting in an issue with the neutral and inoffensive designation "Laodicea on the Sea" (issue no. 21b).¹³ During Caesar's visit to Syria in 47 the problems were settled, and Laodicea received the honor of being allowed to rename herself, adding the name of the dictator to her own and henceforth appearing as "Julia-Laodicea." This title becomes permanent on her coins from the second year of the Caesarian era, 47/6.

WEIGHTS AND DIE POSITION

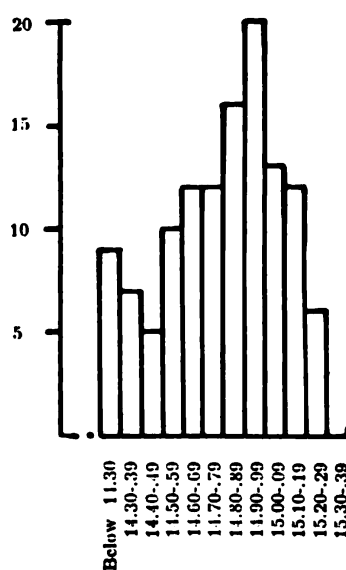
I have registered a total of 136 weights, but apparently two different weight standards were used. From year 5 of the Caesarian era (44/3)

¹² Seyrig, "Ères," pp. 93–94.

¹³ The place of this issue *between* the coins inscribed with legend *a* and legend *c* was already perceived by G. F. Hill, *NC* 1925, pp. 15–16. For another use of the "neutral" legend *b* in 42/1, see H. Seyrig, "Ères," p. 96.

the coins of Laodicea were struck according to the Ptolemaic weight standard with a tetradrachm of ca. 14.30 g. This was the weight standard also used at Tyre, Sidon and Ascalon for their autonomous issues of the second and first centuries. There are only 14 coins approximating this weight: the two heaviest weigh 14.16 g and 14.01 g, while all the others are well below 14.00 g. The weights of the 122 coins struck before 46/5 are presented in Fig. 1.

FIG. 1. Frequency Table of Laodicean Coins



The peak of the frequency table occurs in the interval 14.90-.99 g which, with the addition of ca. 1%, gives a standard weight of the tetradrachm of ca. 15.10 g. This is the weight standard used by Aradus for her civic tetradrachms from 138/7. It was imitated by Seleucia Pieria, Tripolis and Elaeusa as well as by Laodicea. At Aradus and Tripolis the weight standard was ca. 15.30 g, while Seleucia used the same, slightly lighter variant as Laodicea.¹⁴

¹⁴ On the Aradian coin standard see O. Mørkholm, "The Attic Coin Standard in the Levant during the Hellenistic Period," *Numismatica antiqua Paulo Naster oblata* (Louvain, 1982), pp. 144-45 where I have argued that it should be regarded as a separate standard, not just called "reduced" Attic.

The die position of the coins is upright or twelve o'clock. This indicates the use of fixed or adjusted dies, a technical feature that seems to have been first used in the Levant and from there to have spread to the other parts of the hellenistic world.

THE DIES

In the appendix all the variant monogram combinations on the tetradrachms known to me are listed. The individual obverse dies used have been identified and numbered consecutively from 1 to 34. The reverse dies are much more numerous and have not been recorded individually. In the column farthest to the right, the number of specimens known to me has been noted for each variant. It appears that 145 specimens are recorded, struck from 34 obverse dies, giving a ratio of obverse dies to specimens of nearly 1:4.3. The distribution is, however, very uneven. The total may be broken up in to three subdivisions:

Years 4-20	(78/7-62/1)	18 obv. dies,	47 spec.	1:2.6
Years 23-33, 1-9	(59/8-40/39)	10 obv. dies,	89 spec.	1:8.9
Years 18-32	(31/0-17/6)	6 obv. dies,	9 spec.	1:1.5
		34 obv. dies.	145 spec.	

From these figures it becomes apparent that this material is much more representative for the middle period than for the beginning and the end of the series. We may assume with some confidence that the record of obverse dies is practically complete for the years 59/8-40/9, where the index figure of specimens per obverse die is 8.2. For the other periods with their low index figures new obverse dies and even new variants may still be expected to turn up.¹⁵ The considerable increase in recorded specimens for the middle period is due to the fact that all the known hoard material shows a strong concentration within these years.

¹⁵ On the statistical background for the index figure see Wayne E. McGovern, "Missing Die Probabilities, Expected Die Production and the Index Figure," *ANS-MN* (1980), pp. 209-23.

Another interesting question is the long life of some of the obverse dies. Obverse die 7 was used in years 11, 12 and 15, obverse die 13 in years 17, 18 and 20. Obverse dies 19 and 25 were striking coins in years 23 and 25 and in years 31 and 33 respectively. While these instances can be paralleled by material from other coin series, the issues of Laodicea contain two examples of exceptionally long-lived dies. Obverse die 22 appears in years 24–27 and 30–31, that is to say it was in active use over a period of eight years. As far as we know, coin production at Laodicea was stopped in two of these years, 28 and 29, but nevertheless the lifetime of this die is quite extraordinary. Just as astonishing is the longevity of obverse die 26 which we find in years 1–3, 5 and 9 of the Caesarian era. Again there are some breaks in the annual sequence, years when the mint presumably was not functioning, but again a life span of nine years for an obverse die is something of a record.

In another paper dealing with the lifetime of obverse dies in other hellenistic coin series¹⁶ I have come to the rather obvious conclusion that the longevity of the obverse dies depended on the production rate at the mint in question. When the mint was small and coinage not necessarily produced every year, only a single pair of dies was used. The obverse die might then be retained for several years. The longevity of certain obverse dies thus becomes an indication of small and sporadic minting during these years. The lifetime of the obverse dies is in inverse relationship to the production rate of the coinage in question.

CIRCULATION

Tetradrachms from Laodicea have been found in three hoards.

IGCH 1581. This hoard had more than 70 tetradrachms from years 76/5 to 44/3. Seventeen specimens were acquired by the American Numismatic Society and four by the British Museum. According to *IGCH* they were found with silver coins of Seleucia Pieria, Aradus and

¹⁶ O. Mørkholm, "The Life of Obverse Dies in the Hellenistic Period," *Studies in Numismatic Method* (Cambridge), pp. 11–21.

Tyre. It is, however, remarkable, not to say peculiar, that the series of the two last named cities according to the record stop in 61/0 and 63/2 respectively. This might be taken to indicate that Noe was after all right in regarding these coins as deriving from two different hoards one comprising the coins of Laodicea, and the other, buried nearly 20 years earlier, the remaining coinage.¹⁷ The find place of the first lot was, most probably, Latakia itself.

IGCH 1582 = Seyrig, *Trésors du Levant* no. 36. Two tetradrachms of Laodicea (year 31 of civic era, year 2 of Caesarian era) were found at Tartus (Antaradus) with 16 coins of Aradus, the last of which was struck in 44/3.

Coin Hoards 6, no. 50. In 1980 a hoard of Laodicean silver began to appear on the market. It was said to have been found somewhere in Syria in 1979 and to have contained ca. 200 specimens. As far as I know, the dates ranged from year 11 to year 30 of the civic era (71/0–52/1).¹⁸ No other coinages are known to belong to the same find.

The information from these three hoards is not very exciting. The find places indicate a local circulation and the use of the Aradian weight standard would have tended to keep the coins within a rather narrow circulation area comprising northern Phoenicia, Syria Seleucis, and eastern Cilicia.

CONCLUSION

We may now attempt to draw a general picture of the production of autonomous tetradrachms in the late second and first centuries within the former Seleucid kingdom and, on the basis of the preceding detailed discussion, try to place the silver coinage of Laodicea in its proper context.

¹⁷ S. P. Noe, *A Bibliography of Greek Coin Hoards*, 2nd ed., ANSNNM 78 (1937), nos. 604 and 871. The distinction between the two hoards is also found in a letter of July 1927 from the dealer Roupen Ezadjian, Beirut, who sold coins from both lots to the ANS.

¹⁸ I have listed a total of 49 coins as probably deriving from this hoard; year 11, 2; year 12, 1; year 17, 5; year 18, 1; year 20, 3; year 23, 18; year 24, 3; year 25, 7; year 26, 2; year 30, 7. This includes the 16 specimens listed in *Coin Hoards* 6.

In 138/7 Aradus started producing a prolific series of autonomous tetradrachms, struck on a local standard of ca. 15.30 g. In 126/5 Tyre was rewarded with the privilege of striking civic silver coins, but adopted the Ptolemaic weight with a tetradrachm of ca. 14.30 g. The same standard was used by Sidon, after she obtained her autonomy in 112/1. Down to this time the royal issues of Antioch and other Seleucid mints maintained an Attic standard of ca. 16.80 g for the tetradrachm although with a tendency towards a slight and gradual further reduction. In 109/8 Seleucia Pieria was declared autonomous, and her first silver tetradrachms appeared in year 4 (105/4), struck on a somewhat light Aradian standard of ca. 15.10 g. At about this time the royal issues of Antioch were suddenly reduced to ca. 16.30 g for the tetradrachms.¹⁹ More important is the fact that precisely during the years 107/6 to 101/0 the production at Aradus seems to have stopped or, at least, to have been reduced dramatically.²⁰ This may have induced the Pierians to start their own production in order to fill the void. Apparently, the Aradian silver had already proved useful and acceptable within the region.

Some time between 105 and 95 Tripolis became autonomous. Her civic tetradrachms, dated between year 3 and year 32 of her local era, were struck on the full Aradian standard. The few and undated civic tetradrachms of Elaeusa in Cilicia were struck on the same standard. They belong most probably to the first decades of the first century. The era of Ascalon started in 104/3. Her tetradrachms, with complimentary portraits of Egyptian rulers, are dated between year 20 (85/4) and year 66 (39/8), the last with a splendid portrait of Cleopatra VII.²¹

¹⁹ See n. 14.

²⁰ For Aradus I have consulted *BMCPHoenicia*; Babelon, *Les Perses achéménides*; D. C. Baramki, *The Coin Collection of the American University of Beirut Museum. Palestine and Phoenicia* (Beirut, 1974); J. Rouvier's list in *JIAN* 3 (1900), pp. 237ff.; as well as the collections in Copenhagen and New York. According to this material during the years 107/6 to 101/0 (Aradian era 153 to 159) there was no minting of tetradrachms except a single specimen from 103/2 (Aradian era 157) recorded by Rouvier under no. 272 as from his own collection. Rouvier's collection was acquired by E. T. Newell, but the coin seems not to be at the ANS now.

²¹ For the coinage of Ascalon see A. Baldwin Brett, "A New Cleopatra Tetradrachm of Ascalon," *AJA* 41 (1937), pp. 452-63.

Naturally, these coins were struck on the Ptolemaic standard also used at Tyre and Sidon.

With the advent of Tigranes in 83 political and economic changes occurred. Seleucia was hostile to the Armenian king and closed its gates against him.²² Its production of silver coins came to an end precisely in year 26 (81/3). At Tripolis there is a gap in the silver coinage between years 18 and 30 which may correspond approximately to the reign of Tigranes. On the other hand, Aradus and Tyre continued their minting on a quite extensive scale. And, as already mentioned, Laodicea eagerly took over the position of Seleucia as the leading seaport on the Syrian coast. Having received a grant of autonomy from Tigranes in 81/0 she began coining her tetradrachms in year 4 (78/7). The first coinages seem to have been rather small, but from year 12 (70/9) two officinae were functioning. The weight standard used was the light Aradian standard of Seleucia Pieria. During the same time the Attic weight tetradrachms of Tigranes, struck at Antioch, dropped to ca. 15.60–16.00 g, i.e. they were still recognizably heavier than the coins of Aradian weight.²³

In spite of the fact that the opposition of Seleucia to Tigranes recommended the city strongly to Pompey when he organized the Syrian province in 64–63,²⁴ it had no effect on the monetary situation. Seleucia did not resume the minting of silver coins, while Laodicea in 65/4 increased her production, using for the first time five obverse dies and three officinae during a single year.

Down to year 33 (49/8) coin production was fairly continuous at Laodicea. In years 23 (59/8, 24 (58/7) and 31 (51/0) three officinae were used, but the longevity of some obverse dies, especially no. 22, suggests that only a limited amount of coin was actually struck. During the 20 years from 59/8 to 40/39, the period when the coinage is best represented (see above, p. 96), 10 obverse dies were used: not a very impressive number, which again indicates a rather small production.

²² On Tigranes in Syria see the positive statement of Justinus 40.1.4. Strabo 16.2.8 (C 751) mentions the opposition of Seleucia to his rule.

²³ See my article mentioned in n. 14. The weights of the coins of Tigranes from Antioch are recorded by P. Z. Bedoukian, *Coinage of the Artaxiads of Armenia* (London, 1978), pp. 49–54, nos. 17–42.

²⁴ Strabo 16.2.8 (C 751).

Caesar's victory in the civil war had important repercussions in Syria. During the year after Pharsalus, 48/7, Laodicea first adopted a new era and then changed the coin inscription. The proud designation of the city as "sacred and autonomous" was dropped in favor of the colorless geographical description "on the sea." It is a natural inference that some loss of favor with the Roman government was incurred or feared. However this may be, the political situation soon changed for the better. During his stay in Syria in 47 Caesar allowed the city to add his own family name to her old name, a singular distinction which may have amounted to a refoundation of the city.²⁵ From year 2 of the Caesarian era (47/6) the silver tetradrachms were issued in the name of the inhabitants of Julia-Laodicea.

Further troubles, however, were looming ahead. In 44/3 Aradus issued the last of its long series of tetradrachms,²⁶ and in the same year Laodicea changed to the Ptolemaic standard. Thus the Aradian standard disappeared completely after having served as a regional coin standard for nearly 100 years. The Ptolemaic standard continued as did a reduced Attic standard at the mint of Antioch.²⁷ The changes must bear some relationship to the unsettled political conditions after the murder of Caesar. In the spring of 43 Laodicea was besieged and captured by Cassius, while the Caesarian Dolabella killed himself.²⁸ Issue 24 of Laodicea, the first to be struck on the Ptolemaic standard, was in all probability issued by Dolabella. It is a tempting hypothesis to connect the burial of the Latakia hoard (see above, p. 97-98) with the siege and capture of the city in this very year. Moreover, a bronze coinage of year 7 (42/1), inscribed "Laodicea ad Mare," has convincingly been

²⁵ On Caesar in Syria and Cilicia see *Bellum Alexandrinum* 65-66.

²⁶ The issue of tetradrachms at Aradus became quite sporadic after 60/9. Only one specimen of 44/3 (Aradian era 216) is known: cf. H. Seyrig, *Trésors du Levant anciens et nouveaux*, p. 107, trésor 36, no. 15.

²⁷ On the provincial silver coinage of Antioch between ca. 60 and 20 see E. T. Newell, "The Pre-Imperial Coinage of Roman Antioch," *NC* 1919, pp. 69-113; A. R. Bellinger, "Crassus and Cassius at Antioch," *NC* 1944, pp. 59-61; Seyrig, "Ères," pp. 81-82. The weight standard was still well above the former Aradian standard for the coins struck before 37.

²⁸ Appian, *Bell. civ.* 4.60-62; Strabo 16.2.9 (C 752); a report from the siege in Cicero, *ad fam.* 12.13.4.

ascribed by Seyrig to a time when the city was still under the authority of Cassius who would hardly have allowed the continued use of the dead dictator's name.²⁹

After the eventful year 44/3 there is a gap in the silver coinage until year 9 (40/9), when it was resumed under the rule of Mark Antony. It is worthy of notice that the obverse die used for this issue (no. 26) had been used since year 1 of the Caesarian era and appears in all the intervening years from which a silver coinage is known. As already mentioned, the lifetime of this die is extraordinary.

After 40/9 the issue of silver at Laodicea becomes sporadic. Two issues of years 18 (31/0) and 19 (30/9) may be connected with the establishment of Octavian's rule in the East. Finally four issues of years 29–32 (20/9–17/6) mark the end of the series of silver tetradrachms of Laodicea. The first year, significantly, is the one which Augustus himself spent in the East, dealing with the frontier problems and receiving the Roman standard from the Parthians. Why the issues continued for three more years is difficult to surmise.³⁰ Already during the 30s the silver coinages of Sidon and Ascalon had come to an end. The only civic silver coinage in the Levant which continued further into the Imperial period was that of Tyre. Its prolific series lasted until about A.D. 60, well into the reign of Nero.

²⁹ Seyrig, "Ères," p. 97.

³⁰ The provincial silver of Antioch probably also came to an end in 17/6. See E. T. Newell, "The Pre-Imperial Coinage of Roman Antioch," *NC* 1919, p. 113.

APPENDIX

Variant	Year	L. Field	Below Throne	Exergue	Obv. Die Nos.	No. of Specimens
Legend a						
1	4 (78/7)	Δ	⊙	⊙E	1-2	2 (Plate 13, 1-2)
2a	6 (76/5)	ς	⊙	?	{	{
b	6 (76/5)	Ξ ς	⊙	ΣE		
3	7 (75/4)	Z	⊙	?	4	1 (Plate 13, 5)
4	10 (72/1)	I	AΣ	⊙E	5-6	3 (Plate 13, 6-7)
5	11 (71/0)	AI Δ	⊙	KA	7	5 (Plate 14, 8)
6a	12 (70/9)	IB	⊙	KA	7	2 (Plate 14, 9)
b	12 (70/9)	IB	⊙	ΣE	8	1 The Hague
7	13 (69/8)	ΓI	⊙	ΣE	9	1 (Plate 14, 12)
8a	15 (67/6)	EI	⊙	KA	{	{
b	15 (67/6)	EI	⊙	ΣE		
9a	16 (66/5)	ς I	⊙	KA	10	2 (Plate 14, 10)
b	16 (66/5)	ς I	⊙	ΣE	11 ^a	1 (Plate 14, 13)
10a	17 (65/4)	ZI	⊙	KA	12	2 (Plate 14, 11)
b	17 (65/4)	ZI	⊙	ΣE	13-15	1 (Plate 14, 14)
c	17 (65/4)	ZI	⊙	ΣE	16	8 (Plate 15, 15, 18)
11a	18 (64/3)	HI	AΣ	AΣ	17	2 (Plate 15, 19)
b	18 (64/3)	HI	AΣ	KA	13	7 (Plate 15, 21)
12	20 (62/1)	K	Δ	ΣE	16	2 (Plate 15, 16)
				KA	13; 18	1 (Plate 15, 20)
				KA	13; 18	4 (Plate 15, 17)

<i>Variant</i>	<i>Year</i>	<i>L. Field</i>	<i>Below Throne</i>	<i>Exergue</i>	<i>Obv. Die Nos.</i>	<i>No. of Specimens</i>
13a	23 (59/8)	Γ K	⌘	KA	19-20	14 (Plate 16, 22, 25)
b	23 (59/8)	Γ K	⌘	Σ E	19	10 (Plate 16, 23)
c	23 (59/8)	Γ K	⌘	Ξ Ω	21	3 (Plate 16, 26)
14a	24 (58/7)	Δ K	⌘	KA	22	3 (Plate 16, 28)
b	24 (58/7)	Δ K	⌘	Σ E	21	2 (Plate 16, 27)
15a	25 (57/6)	E K	⌘	KA	22	7 (Plate 17, 29)
b	25 (57/6)	E K	⌘	Σ E	19	2 (Plate 16, 24)
16	26 (56/5)	ς K	⌘	KA	22	2 (Plate 17, 30)
17	27 (55/4)	I K	⌘	?	22	3 (Plate 17, 31)
18a	30 (52/1)	Λ Ι Σ	⌘	KA	22	10 (Plate 17, 33)
b	30 (52/1)	Λ Ι Σ	⌘	Σ E	23-24	7 (Plate 17, 32)
19a	31 (51/0)	A Λ I H	⌘	KA	22	2 (Plate 17, 34)
b	31 (51/0)	A Λ I H	⌘	NI	22	1 (Plate 17, 35)
c	31 (51/0)	A Λ I H	⌘	AN	25	3 (Plate 18, 36)
20a	33 (49/8)	Γ Λ I H	⌘	AN	25	1 New York
b	33 (49/8)	Γ Λ	⌘	AN	25	1 (Plate 18, 37)

<i>Variant</i>	<i>Year</i>	<i>L. Field</i>	<i>Below Throne</i>	<i>Exergue</i>	<i>Obv. Die Nos.</i>	<i>No. of Specimens</i>
21a	1 (48/7)	A Σ	☐	KΔ	26	1 (Plate 18, 40)
Legend b						
21b	1 (48/7)	A Ξ	☐	KΔ	27-28	5 (Plate 18, 38, 39)
Legend c						
22	2 (47/6)	B Δ	☐	KΔ	26	2 (Plate 18, 41)
23	3 (46/5)	Γ AΣ	Δ	KΔ	26	4 (Plate 18, 42)
24	5 (44/3)	E AΛ	Δ	KΔ	26	2 (Plate 19, 43)
25	9 (40/9)	⊙ EY	⊙ E	Δ I	26	3 (Plate 19, 44)
26	18 (31/0)	HI ⊙ E	ME	Λ Y	29	1 (Plate 19, 45)
27	19 (30/9)	⊙ I ZΩ	ME	Λ Y	30	1 Vienna
28	29 (20/9)	⊙ K Δ I	⊙ E	Γ Λ	31	1 (Plate 19, 46)
29	30 (19/8)	Λ Δ I	⊙ E	Γ Λ	32	4 (Plate 19, 47)
30	31 (18/7)	A Λ Δ I	⊙ E	Γ Λ	33	1 (Plate 19, 48)
31	32 (17/6)	B Λ ME	Α Π	Γ Λ	34	1 (Plate 19, 49)

* Obverse die 11 may be a recut version of obverse die 7.

KEY TO PLATES

Most variants are illustrated as well as all
obverse dies except nos. 8, 15, 18, 24 and 30.

<i>Plate, No.</i>	<i>Variant</i>	<i>Obv. Die</i>	<i>Location</i>
13.	1.	1	Vienna 27777
	2.	1	Paris 1064
	3.	2a	New York, ANS, ex Latakia hoard (<i>IGCH</i> 1581)
	4.	2b	Paris, du Clercq 274
	5.	3	Paris 1065
	6.	4	Paris 1066
	7.	4	Paris, Delepierre 2983
14.	8.	5	Münz. u. Med. 429, Jan. 1981, 22
	9.	6a	London, <i>BMCGalatia</i> , p. 247, 4
	10.	8a	London, BM acq. 1926
	11.	9a	Paris 1067
	12.	7	Vienna 36344
	13.	8b	New York, ANS
	14.	9b	New York, ANS
15.	15.	10a	Münz. u. Med. 267, August 1966, 4
	16.	11a	Brussels, <i>Coll. de Hirsch</i> 1730
	17.	12	New York, ANS
	18.	10a	New York, ANS
	19.	10b	Berlin, ex Löbbecke 1906
	20.	11b	New York, ANS
	21.	10c	Munich
16.	22.	13a	Copenhagen, ex 1979 hoard
	23.	13b	New York, ANS
	24.	15b	Copenhagen, ex 1979 hoard
	25.	13a	B. Peus Sale 303, Oct. 1981, 288, ex 1979 hoard
	26.	13c	Paris R.1681
	27.	14c	Copenhagen, ex 1979 hoard
	28.	14a	Copenhagen, ex 1979 hoard
17.	29.	15a	New York, ANS, ex Latakia hoard (<i>IGCH</i> 1581)
	30.	16	Bonham/Vecchi 1, May 1980, 207, ex 1979 hoard
	31.	17	Copenhagen, ex 1979 hoard
	32.	18b	Paris R.1683

	33.	18a	22	Copenhagen, ex 1979 hoard
	34.	19a	22	New York, ANS, ex Latakia hoard (<i>IGCH</i> 1581)
	35.	19b	22	New York, ANS, ex Latakia hoard (<i>IGCH</i> 1581)
18.	36.	19c	25	London, <i>BCMGalatia</i> , p. 247, 7
	37.	20b	25	New York, ANS, ex Latakia hoard (<i>IGCH</i> 1581)
	38.	21b	27	Paris 1060
	39.	21b	28	New York, ANS, ex Latakia hoard (<i>IGCH</i> 1581)
	40.	21a	26	New York, ANS, ex Latakia hoard (<i>IGCH</i> 1581)
	41.	22	26	Paris R.1684
	42.	23	26	London, BM acq. 1924, ex Latakia hoard (<i>IGCH</i> 1581); <i>NC</i> 1925, p. 14, 47
19.	43.	24	26	London, BM acq. 1924, ex Latakia hoard (<i>IGCH</i> 1581); <i>NC</i> 1925, p. 15, 48
	44.	25	26	Berlin, ex Imhoof-Blumer 1900
	45.	26	29	Paris 1081
	46.	28	31	Paris 1080
	47.	29	32	<i>SNGCop</i> 36, 325
	48.	30	33	New York, ANS
	49.	31	34	Berlin, ex Fox 1873. Pierced

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ROME AND ALEXANDRIA:
THE MINTING OF EGYPTIAN
TETRADRACHMS UNDER SEVERUS ALEXANDER

(PLATE 20)

ANDREW BURNETT AND PAUL CRADDOCK

In the past it has usually been assumed that a coin which bears a city's name was minted in that city from dies produced by the engravers at that city's mint, but in the last decade or so there have been a number of studies which have shown that, even though a coin may appear to come from a particular mint, the evidence of style or die links may suggest that it was in fact minted elsewhere. Kraft,¹ for instance, drew attention to the numerous links of dies and style between the obverses of "Greek Imperials" from different cities and interpreted these as showing that most of the imperial civic coinage of Asia Minor was made at only a few centralized mints. Analogously, Baldus² pointed out that the Syrian tetradrachms of the Roman emperor Philip fall into two stylistic groups: one group of local style have the name ANTIOXIA on the reverse, and the other, with the name MON VRB, have a finer style, like that of the antoniniani and denarii of the mint

¹ K. Kraft, *Das System der kaiserzeitlichen Münzprägung in Kleinasien* (Berlin, 1972).

We would like to thank R. Preston for taking the samples of the coins. P. C. is responsible for the scientific content of this paper and A. B. for the numismatic.

² H. R. Baldus, *MON(eta) VRB(is)—ANTIOXIA: Rom und Antiochia als Prägestätten syrischer Tetradrachmen des Philippus Arabs* (Frankfurt, 1969).

of Rome. Baldus argued that **MON VRB** (= Moneta Urbis, the mint of Rome) coins were struck at Rome and then shipped out to Syria.

The idea of coins being made in one place and then transported to another to be issued into circulation has not won immediate or universal acceptance, and scholars have suggested other explanations for the phenomena noted by Kraft and Baldus. The die links between "Greek Imperials," for instance, might show only that obverse dies travelled from city to city, perhaps taken by the itinerant artists who produced them. Similarly the dies of the **MON VRB** tetradrachms might have been engraved at Rome, then taken to Antioch and only there used to strike coins.³ There are many other cases where a similar alternative explanation is possible, but here we wish to consider only one case, since it allows us to conclude with certainty that coins, and not dies, were shipped.

This case concerns the Egyptian tetradrachms minted by Severus Alexander (A.D. 222–35) in the fourth, fifth and seventh⁴ Alexandrian years of his reign. Since Dattari⁵ first drew attention to these coins in 1903, scholars⁶ have been aware that the coins of these years fall into two groups, each of which has a number of distinctive features.

First, one group continues the style and appearance of tetradrachms minted by Elagabalus and by Alexander in his early years (Plate 20, 1–3; cf. 7). The other group consists of coins of a finer style, and the portrait of the emperor is exactly like that on denarii minted at Rome (Plate 20, 4–6; cf. 8).

³ E.g. A. Johnston "New Problems for Old," *NC* 1974, p. 205, and "The Intermittent Imperials," *NC* 1980, pp. 206–7 and 209; I. Carradice and M. Price in R. A. G. Carson, P. Berghaus and N. M. Lowick, eds., *A Survey of Numismatic Research 1972–77* (Berne, 1979), p. 118; D. R. Walker, *The Metrology of the Roman Silver Coinage* 3, BAR S40 (Oxford, 1978), Appendix 3.

⁴ There are no relevant coins of the sixth year, rather surprisingly. One can reject the idea that "seventh" is a mistake for "sixth," since the types of the seventh year include Julia Mamaea. She was replaced by Orbiana in the sixth year, and only returned to the Egyptian coinage in the seventh.

⁵ G. Dattari, "Appunti di Numismatica Alessandrina: XVI," *RIN* 1903, pp. 292–94.

⁶ J. G. Milne, "Some Alexandrian Coins," *Journal of Egyptian Archaeology* 4 (1917), p. 178; J. Vogt, *Die Alexandrinischen Münzen* (Stuttgart, 1924), pp. 184–85; Walker (above, no. 3), p. 159.

Second, the regnal years on Egyptian style coins are expressed as ΛΔ, ΛΕΛ and Ζ, but on Roman style coins as Λ ΤΕΤΑΡΤΟΝ, ΛΠΕΜΠΤΟΝ and ΛΕΒΔΟΜΟΝ (Plate 20, 1–6).

Third, the busts and legends vary. On Egyptian style coins we find: 4th year, Α ΚΑΙ ΜΑΡ ΑΥ(Ρ) ΚΕΥΗΡ ΑΛΕΞΙΑΝΔΡΟΝ-ΕΥΚΕΒ, unbearded bust, draped and cuirassed from rear (Plate 20, 1); 5th year, Α ΚΑΙ ΜΑ ΑΥΡ ΚΕΥ ΑΛΕΞΙΑΝΔΡΟΝ ΕΥ, bust as before (Plate 20, 2); 7th year, Α ΚΑΙ ΜΑΡ ΑΥ ΚΕΥ ΑΛΕΞΙΑΝΔΡΟΝ ΕΥ, lightly bearded bust, cuirassed and seen from front (Plate 20, 3). The Roman style coins of all three years, however, have: Α ΚΑΙ Μ ΑΥΡ ΚΕΟΥΗΡ ΑΛΕΞΙΑΝΔΡΟΝ ΕΥΚΕΒ, lightly bearded bust, draped and seen from rear (Plate 20, 4–6). As well as the differences in legends and busts, the spelling⁷ and letter forms⁸ also vary.

Fourth, the reverse types diverge: although most of the types used on Roman style coins occur (even if rarely) on Egyptian style coins, the latter have many more which are not found on Roman style coins.⁹ Even when a type is common to both groups it can be seen to be of quite different style (cf. Plate 20, 4 and 9).

These four stylistic features leave no doubt that there are two distinct groups of coins. One continues the style of earlier Alexandrian issues, while the other is quite different from them, but very similar to coins minted at Rome.

One never finds a combination of the two styles on different sides of the same coin, and there are also a number of physical differences in the way the coins were made. First, Egyptian style coins have a fixed

⁷ ΚΕΥΗΡ as opposed to ΚΕΥΟΗΡ.

⁸ On Egyptian style coins the Ι has a vertical upright, but on Roman Style coins a curved one.

⁹ Roman style coins have, in year 4, a bust of Mamaea, a bust of Sarapis, Sarapis standing left, Sarapis seated left and a head of Zeus Ammon; in year 5, a bust of Mamaea, a bust of Orbiana, and the three Sarapis types; in year 7 the same types as year 4 except that the Sarapis bust is not recorded. Alexandrian coins of years 4 and 5 have most of these types, although Mamaea is usually, and Orbiana always, shown as a separate obverse. Many other types occur on Egyptian style coins of these years (see e.g. J. G. Milne, *Catalogue of Alexandrian Coins* [Oxford, 1971]), but in year 7 these are replaced with a new set of types, which have nothing in common with the Rome style coins.

die axis of 12 o'clock (or occasionally 11:30), but Roman style coins have an axis which is usually about 12 o'clock (varying between 11 and 1) or sometimes 6 o'clock (varying between 7 and 5),¹⁰ i.e. the same as denarii minted at Rome. Second the coins are of different sizes. The Egyptian style coins are thicker and have a smaller diameter, as Fig. 1 shows. The weights, however, appear to be the same, as Fig. 2 shows, although the weights of the Roman style coins were less strictly controlled.¹¹ Finally the metallic composition of the two groups is slightly, but noticeably, different as is shown by the analyses in the Appendix. The Roman style coins contain small, but measurable, quantities of tin and zinc, the Egyptian have none; and the Roman style coins have a little more lead.

So although the two groups have almost exactly the same fineness (6%), the trace elements suggest that they were made from different stocks of metal.

These physical differences leave little doubt that the two groups were made in different places. One group continues the practice of Alexandria, the other shares a common style and die axis with the mint of Rome. We conclude that one group was made at Alexandria, and the other at Rome.¹² Both, however, were put into circulation in Egypt.¹³

This conclusion raises a number of general questions of interpretation. It is natural to ask, in the first place, how common it was for silver coins to be minted in one place and issued elsewhere. This is something of a crux in contemporary numismatics.¹⁴ In the case of Egypt, the Roman style coins of Alexander stand out from the run of the mint, one of the most prolific minting operations of the ancient world, so it seems probable that it was exceptional for the Rome mint

¹⁰ See J. Vogt (above, n. 6).

¹¹ Compare Dattari (above, n. 5), Walker (above, n. 3).

¹² Both Vogt and Walker seem to envisage the possibility of a section of the Roman mint working in Alexandria, but the different metallic composition of the two groups of coins rules this out.

¹³ The billon tetradrachm only circulated in Egypt, where coins of both groups are found: see e.g. the hoard discussed below (n. 16).

¹⁴ See e.g. M. Weder, "Zu den Arabia-Drachmen Trajans," *SM* 107 (Aug. 1977), pp. 47-61, A. Burnett, "Catalogues, Coins and Mints," review-article *JRS* 68 (1978), pp. 174-75, Carradice and Price (above, n. 3).

Fig. 1. Diameters

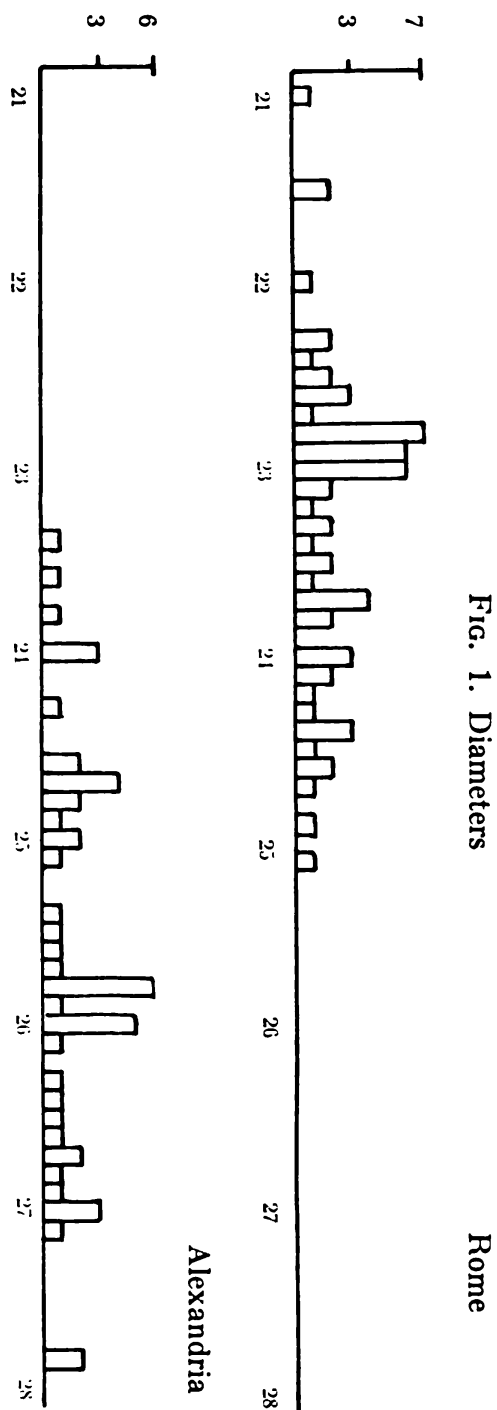
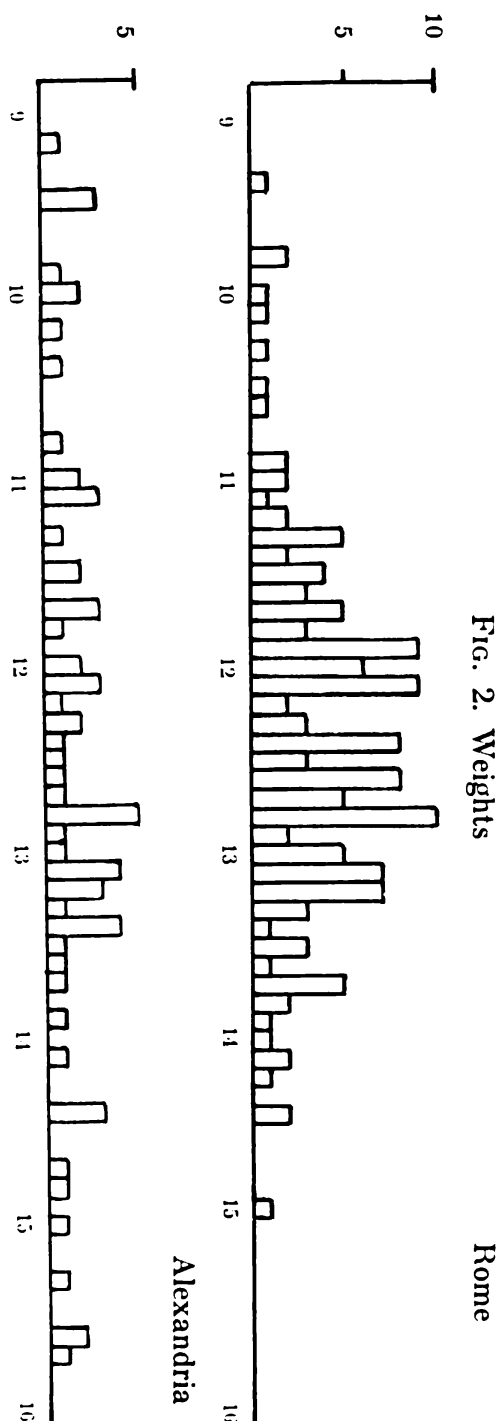


Fig. 2. Weights



to "help" the Alexandrian in this way. This case tends to support Baldus's interpretation of the MON VRB tetradrachms (as minted at Rome), and they again represent an exception to the history of the Antioch mint. We should see the problem not just in terms of Rome and the provincial mints, since one provincial mint could similarly mint coins for another province.¹⁵ Probably the output of the big mints like Antioch and Alexandria was supplemented by other mints only occasionally. On the other hand, the smaller and more isolated issues of provincial silver may normally have been produced elsewhere (e.g. the Cretan, Cyrenaic and perhaps Arabian drachms of Trajan).

The second question is why Rome should have made tetradrachms for Egypt. To answer this one should look at the fluctuating quantities of tetradrachms produced under Alexander, as suggested by the Armenian cemetery hoard reported by Breccia.¹⁶

<i>Year</i>	<i>Number</i>
2:	41
3:	27
4:	59 + 8 Roman style
5:	51 + 16 Roman style
6:	28
7:	11 + 3 Roman style
8:	1
9:	0
10:	10
11:	28
12:	23
13:	17
14:	8

Sometimes it is possible to explain a prolific period of coinage by historical events, e.g. it has been suggested¹⁷ that the high output of Alexan-

¹⁵ Alexandria for Syria in Trajan's twelfth year: W. Wruck, *Die Syrische Provinzialprägung von Augustus bis Traian* (Stuttgart, 1931), no. 154.

¹⁶ E. Breccia, "Un ripostiglio di monete imperiali alessandrine," *Bulletin de la Société Archéologique d'Alexandrie* (1920), pp. 230-50.

¹⁷ J. G. Milne, *Catalogue of Alexandrian Coins* (Oxford, 1971), p. xxv.

dria from year 10 of Nero is connected with the use of Alexandria as a base for a proposed Ethiopian expedition and its subsequent use as a base during the Jewish revolt. The heavy coinage of the last years of Alexander's reign is presumably related to his journey to the east in 231 and the campaign against Ardaser (particularly so as he minted no tetradrachms from Antioch). The fairly high level of coining at the very beginning of his reign continues the pattern from the second year of Elagabalus, when the minting of silver in the east was switched from Antioch to Alexandria.¹⁸ Yet even this volume is greatly increased in year 4, the year in which Rome first sent coins out to Egypt. Very little is known of the history of the period, but it is possible that this was the year of the sudden rise to power of Ardaser. The relevant text (of Herodian) is disputed¹⁹ but may date to this year the sudden announcement of Ardaser's rise and the ensuing panic of the Roman governors in Syria and Mesopotamia. If it can be dated to this year, the sudden emergency may explain the decision to send extra funds out to Egypt, no doubt for military preparations.

A final question raised by the analyses of these tetradrachms, minted in the *MONETA AVGVSTI* celebrated on coins of Rome of this same year,²⁰ concerns the Roman conception of silver standards and debasements. The fineness of the Roman style tetradrachms is 6.35%, with a standard deviation of only 0.47: this is extraordinarily close to the fineness of the Egyptian style coins. Thus the mint of Rome had an exact knowledge of the fineness (and weight) of coins minted in Alexandria, and could produce coins extremely consistent with that standard. But the main effort of the Rome mint was in making denarii,

¹⁸ Egyptian tetradrachms are exceedingly rare from the reign of Commodus until year 2 of Elagabalus. It was in 219 that the last tetradrachms were made at Antioch (A. R. Bellinger, *Syrian Tetradrachms of Caracalla and Macrinus*, ANSNS 3 [1940]) until the reign of Gordian III.

¹⁹ Herodian 6.2.1. As received, the text says that Alexander had thirteen years of blameless rule, but in the fourteenth the emergency suddenly arose. As this is impossible late, "fourteenth" has been emended to "tenth," but that emendation offers us no explanation of "thirteen." It has been suggested that the text originally read "three" and "fourth"; this makes good sense of both received numerals and would date the emergency to the fourth year of Alexander's rule. See C. J. Whitaker's Loeb edition of Herodian ad loc. for a discussion of the passage.

²⁰ *BMCRE* 6, 204.

where the degree of control over fineness was much lower: Walker records standard deviations between 4.18 and 9.22% during these years.²¹ So although the mint could make coins to a very precise fineness it did not do so for denarii: as a result, no one in the Roman street could have had a very clear idea of how much silver a denarius of Alexander contained. If this was intentional (and the exactness of the tetradrachms' fineness suggests that it may have been), must we conclude that the mint hoped to disguise the silver standard of its coins by minting coins of identical types, some of which were more base and some more fine?

APPENDIX: ANALYSES

The coins all come from the British Museum collection and were analysed by atomic absorption spectroscopy, taking a sample by drilling a 1 mm hole in each coin's edge.²² Two of the Egyptian style coins had twice the normal silver content, but we can think of no explanation for this. The summary therefore gives two sets of figures for the Egyptian style coins, the first including the two high ones, the second excluding them.

<i>Mint</i>	<i>No. Analyzed</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Mean as Percentage of Cu</i>
Rome	12	6.35	0.47	7.1
Alexandria (1)	21	7.09	1.83	7.8
Alexandria (2)	19	6.59	0.86	7.2

There is no clear evidence for different standard deviations, if the two higher silver coins are omitted. This seems not unreasonable, given the small variation among the rest. There is a statistically significant correlation (0.8) between the lead and tin among the Roman style coins.

²¹ Above, n. 3, pp. 27–29. It is hoped to publish soon some analyses of Macrinus which show an ever greater standard deviation.

²² Dattari (above, n. 5) reports an analysis of one coin as 5.6% silver. He also distinguishes visually between the metals of the two groups of coins. For the method used here, see P. T. Craddock, A. Burnett and K. Preston in W. A. Oddy, ed., *Scientific Studies in Numismatics*, British Museum Occasional Paper 18 (1980), pp. 55–57.

ROMAN STYLE

YEAR 4

	<i>Cu</i>	<i>Pb</i>	<i>Sn</i>	<i>Ag</i>	<i>Fe</i>	<i>Sb</i>	<i>Ni</i>	<i>Au</i>	<i>Co</i>	<i>As</i>	<i>Cd</i>	<i>Bi</i>	<i>Zn</i>
<i>BMC</i> 1596	91.00	1.35	2.00	6.00	.190	.100	.065	.040	.000	.200	.000	.004	.300
<i>BMC</i> 1597	89.00	1.45	2.00	6.20	.300	.100	.070	.040	.000	.150	.000	.004	.300
<i>BMC</i> 1651	90.00	1.60	2.10	6.20	.075	.100	.055	.040	.000	.150	.000	.003	.300
<i>BMC</i> 1658	89.50	1.00	1.10	7.00	.120	.100	.050	.045	.000	.150	.000	.003	.200
<i>BMC</i> 1661	89.50	1.80	2.30	6.20	.060	.100	.050	.040	.000	.150	.000	.005	.350
1925-5-6-1 ^a	89.00	1.35	2.10	6.10	.100	.030	.060	.045	.000	.100	.003	.003	.360

YEAR 5

<i>BMC</i> 1662	91.00	1.45	2.00	5.60	.170	.050	.040	.045	.000	.100	.000	.004	.250
<i>BMC</i> 1663	90.00	1.20	1.70	5.40	.090	.070	.050	.040	.000	.100	.000	.003	.190
<i>BMC</i> 1664	90.00	0.65	2.10	6.00	.030	.100	.050	.045	.000	.100	.000	.005	.220

YEAR 7

<i>BMC</i> 1598	88.50	1.40	1.90	6.40	.090	.100	.040	.045	.000	.100	.000	.002	.350
<i>BMC</i> 1665	90.50	1.10	1.80	6.60	.080	.050	.035	.045	.000	.150	.000	.003	.300
<i>BMC</i> 1660	89.50	1.30	2.00	7.20	.130	.100	.040	.050	.000	.250	.000	.005	1.50

EGYPTIAN STYLE

YEAR 4

1950-10-6-90 ^b	92.50	0.75	.000	5.50	.040	.050	.040	.050	.000	.170	.000	.003	.000
<i>BMC</i> 1606	89.00	1.45	.000	8.00	.000	.100	.000	.050	.000	.200	.000	.003	.000
<i>BMC</i> 1616	92.00	0.95	.000	5.40	.120	.020	.060	.055	.000	.100	.000	.015	.000
<i>BMC</i> 1629	92.50	0.60	.000	6.60	.000	.070	.080	.050	.000	.250	.000	.006	.000
<i>BMC</i> 1645	91.50	0.55	.000	7.40	.000	.020	.120	.025	.000	.350	.000	.015	.000
<i>BMC</i> 1694	91.00	0.74	.000	5.30	.000	.015	.035	.050	.000	.200	.000	.004	.000

YEAR 5

<i>BMC</i> 1607	87.00	0.90	.000	12.00	.110	.030	.045	.100	.000	.130	.002	.004	.000
<i>BMC</i> 1617	92.00	0.70	.000	7.20	.000	.020	.020	.075	.000	.150	.000	.005	.000
<i>BMC</i> 1623	92.00	1.10	.000	6.90	.000	.050	.045	.060	.000	.100	.000	.006	.150
<i>BMC</i> 1630	91.00	0.80	.000	7.20	.000	.100	.040	.050	.000	.150	.004	.005	.000
<i>BMC</i> 1637	92.50	0.85	.000	6.20	.025	.050	.055	.055	.000	.150	.000	.002	.000

^a Year TETAPTOV: Sarapis seated left.

^b Year Δ: head of Zeus.

<i>BMC</i> 1646	91.00	0.80	.000	7.90	.025	.070	.050	.050	.000	.150	.000	.003	.000
<i>BMC</i> 1652	90.00	0.80	.000	7.40	.015	.015	.045	.060	.000	.100	.000	.003	.000
<i>BMC</i> 1673	92.00	0.90	.000	7.60	.085	.030	.040	.070	.000	.150	.000	.003	.000
<i>BMC</i> 1695	86.00	1.00	.000	12.50	.000	.010	.030	.065	.000	.130	.000	.003	.000

YEAR 7

<i>BMC</i> 1611	91.50	1.60	.000	6.60	.045	.080	.035	.075	.000	.100	.000	.004	.250
1950-10-6-93 ^c	93.00	0.30	.000	5.30	.000	.050	.040	.055	.000	.070	.000	.004	.000
<i>BMC</i> 1666	91.50	0.65	.000	6.70	.080	.050	.045	.065	.000	.130	.000	.002	.000
<i>BMC</i> 1675	93.50	1.00	.000	6.40	.100	.070	.080	.055	.000	.150	.000	.005	.000
<i>BMC</i> 1677	91.50	0.40	.000	6.70	.400	.050	.045	.050	.000	.100	.000	.002	.000
<i>BMC</i> 1691	92.50	0.36	.000	6.80	.070	.050	.040	.075	.000	.130	.003	.004	.000

^c Year Z: Dikaioyne seated.

KEY TO PLATE

1. <i>BMCAlexandria</i>	1616
2.	1623
3.	1666
4.	1651
5.	1662
6.	1660
7.	1494
8. <i>BMCSevAlex</i>	262
9. <i>BMCAlexandria</i>	1652

A COIN HOARD OF MAURICE TIBERIUS FROM ANEMURIUM, ISAURIA

(PLATE 21)

JAMES RUSSELL

Since 1966 excavations have been carried out by a Canadian team at the city-site of Anemurium, situated on the east side of Cape Anamur, the southernmost point of Asia Minor.¹ The principal aim of this project has been to investigate some of the major public buildings and the cemetery of the Roman city, but in the process much light has been shed on the early Byzantine phase of the city's history. During this period many of the large buildings erected in the second and third centuries were reused for humbler purposes. In addition, several

¹ The excavations at Anemurium began in 1966 under the direction of Professor Elisabeth Alföldi-Rosenbaum, University of Toronto. I assumed the direction of the project in 1971, since when the work has been sponsored by the University of British Columbia, Vancouver, and financed for the most part by research grants from the Canada Council and, since 1978, the Social Sciences and Humanities Research Council of Canada. For a description of the ruins of the city before excavation, E. Rosenbaum, G. Huber and S. Onurkan, *A Survey of Coastal Cities in Western Asia Minor* (Ankara, 1967), pp. 1–27. For summaries of the history and antiquities of the site on the basis of subsequent fieldwork, see J. Russell, "Anemurium—eine römische Kleinstadt in Kleinasien," *Antike Welt* 7:4 (1976), pp. 2–20, and "Anemurium: The Changing Face of a Roman City," *Archaeology* 33:5 (1980), pp. 31–40. Preliminary reports of excavations have been published in *Türk Arkeoloji Dergisi* since 1966 and shorter summaries have also appeared regularly in "Recent Archaeological Research in Turkey," *Anatolian Studies*, and M. J. Mellink, "Archaeology in Asia Minor," in *AJA*.

buildings, including two baths and four churches, erected for the first time in the early Byzantine period, have been excavated in whole or in part. During this work several hundred coins belonging to the fifth to seventh centuries have been found, a considerable proportion in significant contexts. These will be included in the general catalogue of coins from the site currently in course of preparation. Of special interest, however, is a hoard of thirty-seven copper coins of the late sixth century which was discovered in 1976 and, like all the other finds from the site, is now housed in the Museum at Alanya. Because of its numismatic and archaeological interest it merits separate and more detailed treatment.

CATALOGUE

In addition to the coin description, each entry contains, in parentheses, the acquisition number of the Alanya Museum followed by the excavation inventory number. Illustrated coins are asterisked. Additional references are to the following sources.

- | | |
|------------|--|
| Bates | George E. Bates, <i>A Byzantine Coin Collection</i> (Boston, 1981). |
| Ismirlier | Y. Ismirlier, "Some Unpublished Byzantine Copper Coins," <i>NCirc</i> 77 (1969), pp. 318-22. |
| Metcalf | William E. Metcalf, "A Heraclian Hoard from Syria," <i>ANSMN</i> 20 (1975), pp. 109-37. |
| <i>MIB</i> | Wolfgang Hahn, <i>Moneta Imperii Byzantini</i> , vol. 1 (Vienna, 1981). |
| Seaby | David R. Sear, <i>Byzantine Coins and Their Values</i> (1974). |
| Waage | Dorothy B. Waage, <i>Antioch on the Orontes IV</i> , pt. 2, <i>Greek, Roman, Byzantine and Crusaders' Coins</i> (Princeton, 1952). |

TIBERIUS II CONSTANTINE (578-82)

M

Above, cross

NICOMEDIA

Armored bust facing, cross on crown

	<i>g</i>	<i>mm</i>		<i>yr.</i>	<i>date</i>
1.	12.3	31	↓ NIKO Off. A	II/II	578
	(4648; AN 76/203).		δMTIBICONS TANTSP[DOC 27.2

MAURICE TIBERIUS (582-602)

M

Above, cross

CONSTANTINOPOLE

Armored bust facing with shield, usually helmeted with plume

2. 15.2 33 ↗ CON Off. B II/II 585/6 DOC 27b.
(4678; AN 76/233).]bERPPAV Details of headgear unclear.
- *3. 11.6 28 ↑ CON Off. Γ II/II 585/6
(4661; AN 76/216). δNMAVRC TIBERPPAVI Headgear, crown with cross.

This headgear is not listed in *DOC* for year 4, nor in *MIB*.

4. 13.2 29 ↗ CON Off. Γ II/II 585/6 *DOC* 27c
(4660; AN 76/215).]MAYR JERPPA[Surface badly eroded, headgear unclear.
5. 12.2 32 ↘ CON Off. € II/II 585/6 *DOC* 27e
(4646; AN 76/201).]TIBERPPAV Details of headgear unclear.
6. 11.8 31 ↘ CON Off. A q 587/8 Bates 1503
(4667; AN 76/222). δ[]IBERPPA Paludamentum concealing cuirass, no shield.
7. 12.3 31 ↘ CON Off. A q/II 589/90 *DOC* 31a
(4670; AN 76/225).]TIBERPPA Plumed helmet.
8. 11.4 31 ↗ CON Off. Δ q/II 589/90 *DOC* 31d
(4657; AN 76/212). δNMΔVRI TIBERPPAVC Plumed helmet.
9. 12.1 30 ↗ CON Off. Δ q/II 589/90 *DOC* 31d
(4656; AN 76/209). δNMΔV[]PPA Plumed helmet.
10. 12.2 31 ↗ CON Off. B qI/II 590/1
(4675; AN 76/230). δNMΔVRC TIBERPPAV Plumed helmet.
11. 11.8 30 ↗ CON Off. Γ qI/II 590/1
(4654; AN 76/211). δNMΔVRC TIBERPPA Plumed helmet.

Officina B not listed in *DOC* 32, but see Bates 1537, and *MIB* 67D, p. 113.

Officina Γ with this form of regnal year is not listed in *DOC* 32 or Seaby, but cf. Waage 2186, *MIB* 67 D, p. 113, and Ismirlir, pp. 318–22.

- | | | | | | | | | |
|-----|--------------------|----|---|-------------------|------------------------|---------|-------|-------------|
| 12. | 13.3 | 32 | ↑ | CON | Off. A | X/I | 592/3 | Bates 1548 |
| | (4665; AN 76/220). | | | δNMΔV[] | PAV Paludamentum type. | | | |
| 13. | 11.4 | 29 | ✓ | CON | Off. B | X/II/I | 594/5 | DOC 36b |
| | (4676; AN 76/231). | | | δNMΔVR TIBERIPPPA | Plumed helmet. | | | |
| 14. | 10.5 | 32 | ↓ | CON | Off. B | X/II/II | 595/6 | Metcalf, 47 |
| | (4677; AN 76/232). | | | JAVRIC TIBERPPAV | Plumed helmet. | | | |
| 15. | 11.4 | 34 | ↑ | CON | Off. Γ | X/q | 596/7 | DOC 39a |
| | (4679; AN 76/234). | | |] TIBERPPAVC | Plumed helmet. | | | |

K

Above, cross

Armored bust facing, holding shield and plumed helmet

- *16. 5.2 21 ↓ No mint Off. A q III 590/1
 (4647; AN 76/202).]NMARC TIBERPPAV
- Probably Constantinople mint (*DOC*, p. 311, footnote). Obverse legend resembles that of no. 11 (Constantinople mint) which belongs to the same regnal year.

K

Above, cross

Armored bust facing, wearing cloak and crown

- THESSALONICA
17. 5.8 24 ↓ TEC q 586/7 DOC 77
 (4681; AN 76/236). δNMAURC TIB[

NICOMEDIA		M Above, cross		
		Armored bust facing, crown with cross?		
*18.	13.1 32 ↓ NIKO (4680; AN 76/235). Legend unclear.	Off. B II	583/4	DOC 92b?
19.	12.8 30 ↓ NIKO' (4651; AN 76/206).] NIPPAC	Off. A II/II	585/6	DOC 94
Armored bust, helmet with plume instead of crown				
20.	11.8 34 ↓ NIK° (4658; AN 76/213).] TIBERP	Off. A q I	588/9	DOC 97a
Armored bust, crown				
21.	15.2 32 ↓ NIKO (4668; AN 76/223).] NM AVTIB	Off. A X	591/2	DOC 100a

CYZICUS

M Above, cross
Armored bust facing, helmet with plume?

*22. 10.8 33 ✓ KYZ Off. B q II 589/90
(4652; AN 76/207). **ΙΜΑΥΡΙ** **Ι** **ΙΑΥ**

Off. B not listed in *DOC* 124 with this form of regnal year, but it does appear in *BMCByz* 152 and Tolstoi, 143.

K Above, cross

23. 5.2 23 No mint Off. obscure **Υ** 587/8
(4682; AN 76/237).

Obverse remains uncleaned, since the corrosion bears clear traces of the fabric of the cloth wrapping that had contained the hoard; details obscure.

Mint is uncertain, but the shape of the obverse head suggests Cyzicus (*DOC*, 311, footnote).

ANTIOCH

m Above, cross
Consular bust facing, crown with trefoil ornament

24. 12.1 29 ↓ **ΖΗΕΥ** **Υ**/II 588/9 *DOC* 158c
(4655; AN 76/210). **ΙΙΑΥ**

M

Above, cross

Consular bust facing, crown with trefoil ornament

25.	13.2	31	↓	ΣHEUP'	Off. Γ	Ϟ/III	590/1	DOC 161
		(4663; AN 76/218).		δNMAUΓI CNPACΓ				
26.	11.9	30	↙	ΣHEUP'	Off. Γ	X	591/2	DOC 162c
		(4669; AN 76/224).]CNPACΓ				
27.	11.2	30	↓	ΣHEUP'	Off. Γ	X	591/2	DOC 162c
		(4671; AN 76/226).		δNMAUΓI CNPAC				
28.	10.0	28	↓	ΣHEUP'	Off. Γ	[X]/III	594/5	DOC 165b
		(4662; AN 76/217).		δNMAUΓ CNPAC				
				This coin is sharply bent.				
29.	11.4	29	↓	ΣHEUP'	Off. Γ	X/IIII	595/6	DOC 166b
		(4673; AN 76/228).		δNMAUΓI CNPAC				
*30.	11.4	29	↖	ΣHEUP'	Off. Δ	X/ϣ	596/7	DOC 167
		(4650; AN 76/205).]AC				

Officina Δ not listed in *DOC* but see Hahn *MIB*, p. 121, 96c.

31. 11.0 28 ↓ ζ HEUP' Off. Γ X/ϷI 597/8 DOC 168b
(4659; AN 76/214).]CNḐAUT
32. 11.3 31 ↓ ζ HEUP' Off. Γ X/ϷIII 599/600 DOC 170b.1
(4674; AN 76/299).]CNḐAU[
33. 12.2 31 ↓ ζ HEUP' Off. Γ X/ϷIII 599/600 DOC 170b.1
(4664; AN 76/219). δIMAY PAUT Inscription somewhat blundered.
- *34. 10.2 30 ↑ ζ HEUP' Off. illegible. X/ϷIII 599/600 DOC 170
(4653; AN 76/208). δNM̄AUGṢ]AṖT
35. 9.8 27 ↓ ζ HEUP' Off. Γ X/X 601/2 DOC 172b
(4672; AN 76/227).]ḐAUT
36. 11.2 29 ↓ ζ HEUP' Off. Γ X/X 601/2 DOC 172b
(4666; AN 76/221). δNM̄AUG CNḐ
37. 10.1 29 ↓ ζ HEUP' Off. S X/X 601/2 DOC 172d
(4649; AN 76/204). δNM̄AUGI CNḐAUT

Table 1. Comparative Distribution of Mints for Years 578-602
in Syrian Hoards of Copper Issues

	<i>Tell</i>	%	<i>Coele-</i>	%	<i>Myers</i>	%	<i>Cyrrhes-</i>	%	<i>Ane-</i>	%
	<i>Bisa</i>		<i>syria</i>				<i>tica</i>		<i>murium</i>	
<i>Constantinople</i>	124	38.27	45	42.06	9	52.95	74	42.05	15	40.55
<i>Thessalonica</i>	5	1.54					3	1.70	1	2.70
<i>Nicomedia</i>	50	15.43	18	16.82	1	5.88	18	10.23	5	13.50
<i>Cyzicus</i>	16	4.94	10	9.35			15	8.52	2	5.40
<i>Antioch</i>	129	39.82	34	31.77	6	35.29	66	37.50	14	37.85
<i>Cherson</i>					1	5.88				
<i>Total</i>	324	100.00	107	100.00	17	100.00	176	100.00	37	100.00

The hoard came to light in the service area at the rear of a small bathing establishment (III 15) located in the northern part of the city fronting the west side of the major street that traverses the site from north to south.² The find spot lies close to a small service passage situated in the middle of the west wall of the tepidarium, the central room in a row of three chambers serving the three stages of the bathing process. The coins were not found on the floor of the service area but lay in earth fill at a height of 0.26 m. above the floor. When discovered most of the coins were stuck together in small groups, with a few remaining loose. Evidence for the cloth bag in which they had been wrapped appeared in the impression of the fabric visible on the corrosion of one of the coins. The hoard comprises a total of 37 copper coins, 34 folles and three half folles ranging in date from 578 to 601/2, all but one belonging to the reign of Maurice Tiberius. The mints of Constantinople and Antioch are represented almost equally, with fifteen and fourteen coins each respectively, Nicomedia with five, Cyzicus with two and Thessalonica with one. This distribution of mints corresponds quite closely to the

² For the location of this and other buildings in the city plan see Rosenbaum (above, n. 1), plan 1; Russell, (above, n. 1), "Kleinstadt," abb. 4. For description and plan of the baths themselves, see J. Russell, "Excavations at Anemurium (Eski Anamur)," *Türk Arkeoloji Dergisi* 22:2 (1975), pp. 125-26, fig. 13; 25:1 (1980), pp. 266-67, figs. 6-7, 27-28; *Proceedings of Xth International Congress of Classical Archaeology* (Ankara, 1978), pp. 921-22. For a brief report of the hoard and its context, see J. Russell in "Recent Archaeological Research in Turkey," *Anatolian Studies* 27 (1977), pp. 26, 28; *Classical News and Views* 21:1 (1977), pp. 6, 9, fig. 2.

mints of the coins issued in the period 578–602 in three large Syrian hoards previously published, viz. Tell Bisa,³ Coelesyria⁴ and Cyrrhastica⁵ (Table 1). The similarity in distribution between the very large hoard of Tell Bisa and that of Anemurium is particularly striking, with almost equal representation of coins of the Constantinople and Antioch mints, Nicomedia fairly well represented and with very limited appearance of the Cyzicus and Thessalonica mints. Coelesyria and Cyrrhastica display the same general pattern with some variation.⁶ On this evidence at least it would seem that the coastal regions of Isauria shared with Syria the same pattern in the circulation of copper currency in the last quarter of the sixth century.⁷

³ E. Leuthold, "Monete bizantine rinvenute in Siria," *RIN* (1952–3), pp. 31–49.

⁴ G. E. Bates, "A Byzantine Hoard from Coelesyria," *ANSMN* 14 (1968), pp. 67–109.

⁵ E. Leuthold, "Monete bizantine rinvenute in Cirrestica," *RIN* 73 (1971), pp. 9–24.

⁶ A fourth large Syrian hoard now in the Museum of the American Numismatic Society is not included in the comparative table since only 17 coins from that hoard fall within the time span represented by the Anemurium hoard. The distribution in this case is Constantinople 9 (53%), Nicomedia 1 (6%), Antioch 6 (35%), and Cherson 1 (6%). Although the pattern is not gravely inconsistent with the others, the numbers involved are perhaps too few to be statistically meaningful. W. E. Metcalf, "A Heraclian Hoard from Syria," *ANSMN* 20 (1975), pp. 109–37, see in particular Table 1 for a comparative table of distribution by mints of all the coins of this hoard and those of Tell Bisa and Coelesyria.

An additional hoard, discovered at Paphos on Cyprus, is also of some relevance to the discussion. The hoard comprised a total of 117 coins ranging in date from 579/80–616/7. Twenty of these fall within the period covered by the Anemurium hoard, with a mint distribution pattern as follows: Constantinople 6 (30%), Nicomedia 2 (10%), and Antioch 12 (60%). See P. J. Donald and P. D. Whitting, "A VIIth Century Hoard from Cyprus," *NCirc* 75:6 (1967), pp. 162–65.

⁷ In the absence of published hoards of the period from other parts of Anatolia, the degree to which circulation patterns represented by this Syrian-Isaurian group differed from patterns in other parts of Asia Minor remains a matter for speculation. The conspectus of coins found in the excavations at Sardis from 1958–68, however, suggests a substantially different mint distribution for the reigns of Tiberius II and Maurice. The cumulative totals for the two reigns by mint are Constantinople 86 (57.33%), Thessalonica 20 (13.33%), Nicomedia 23 (15.33%), Cyzicus 13 (8.66%), Antioch 7 (4.66%), Rome 1 (0.66%). The predominance of Constantinople here is in sharp contrast to the scanty representation of the Antioch mint. See G. E. Bates, *Byzantine Coins*, Archaeological Exploration of Sardis, monograph 1 (Cambridge, Mass., 1971), Table 2, p. 5.

The latest coins (nos. 33–35) provide a clear terminus post quem of 601/2 for the deposit of the hoard. There is no lack of events in the following decade or so to account for the hoard's burial. The unsettled conditions surrounding the death of Phocas (608) and the imminent threat of Persian invasion, especially after the capture of Antioch (611), might well have provided the occasion for the owner's action. On the other hand, the absence of any coins of Phocas perhaps indicates a date for the deposit of the hoard earlier in that reign. The possibility that troubles of a local nature not otherwise recorded afflicted the coast of Isauria early in Phocas's reign gains strength from a small hoard of seven gold coins discovered at Selinus (modern Gazipaşa), a coastal city, 91 kilometers west of Anemurium. Consisting of one solidus and one tremissis of Justin II and five solidi of Maurice Tiberius it spans a period comparable to the Anemurium hoard (565–602).⁸ Though not dated precisely, the condition of the coins reported as "somewhat worn" might suggest that they continued in circulation as late as the early seventh century. Troubled conditions in this region around this date may also account for the enormous lamp hoard discovered at Anemurium in 1968. Found stacked in the abandoned hypocaust system of one of the baths it consists of some 650 whole terracotta lamps apparently never used. No datable material was found with the lamps, but it was assumed at the time of their discovery that they represented a merchant's stock hidden away sometime after 650 when the Isaurian coast was exposed to Arab raids from Cyprus.⁹ The possibility that the lamps were concealed fifty years before in connection with the circumstances that prompted the coin hoards, however, should not be overlooked.

The Anemurium coin hoard has also provided welcome confirmation for the rapid decline of the city's material prosperity in the last quarter of the sixth century. The burial of the coins in loose earth mixed with much broken pottery overlying the floor of the service area of the baths clearly suggests that the baths had ceased to fulfill their original function

⁸ S. M. Mosser, *A Bibliography of Byzantine Coin Hoards* (New York, 1935), p. 78.

⁹ H. Williams and P. Taylor, "A Byzantine Lamp Hoard from Anamur (Cilicia)," *Anatolian Studies* 25 (1975), pp. 77–84.

some considerable time before 602, the terminus post quem for the deposit of the hoard. There is in fact good evidence that a destructive earthquake struck the city toward the end of Justin II's reign in 578. This caused the collapse of at least one of the city's churches (III 10 C) which was never repaired and probably accounts for widespread damage in two others.¹⁰ The small baths, III 15, survived the earthquake more or less intact, but the burial of the hoard in the now derelict service area at the rear provides incontrovertible evidence that the building had been turned to other uses at some interval before. It is virtually certain that the city's aqueduct system suffered irreparable damage in the earthquake. This forced the inhabitants to seek an alternative water supply in the form of wells, of which one example, securely dated to the first half of the seventh century, has been excavated in the reused palaestra area of the large Roman baths (E III 2 B).¹¹ With the destruction of the aqueduct we may assume also the closing of the city's baths. In the case of the baths that produced the hoard, the well constructed heated chambers continued in active use for a further three generations, housing various forms of retail activity, to judge from the finds. The service area at the rear, however, probably rendered useless by the collapse of its flimsy tile roof in the earthquake, quickly became a rubbish dump. By the beginning of the seventh century enough earth had accumulated to afford a suitable hiding place for a small cloth bag of copper coins, representing some poor man's modest savings.¹²

¹⁰ For a brief report of the evidence for this occurrence, consisting primarily of a worn follis of Justin II dated 569/70 (AN 78/61) sealed beneath the debris of the collapsed roof, see J. Russell, "Recent Archaeological Research in Turkey," *Anatolian Studies* 29 (1979), p. 185, and *Classical News & Views* 23:1 (1979), p. 6.

¹¹ For details see C. Williams, "A Byzantine Well-Deposit from Anemurium (Rough Cilicia)," *Anatolian Studies* 27 (1977), pp. 175-90.

¹² The total value of the hoard amounting to 35 folles approximates to one sixth of a solidus, or a half-tremissis. I owe this interesting observation to Prof. Philip Grierson to whom I am also indebted for much general advice in the preparation of this report. Besides Professor Grierson, I am deeply obliged to Mustafa Gürdal, Director of the Alanya Museum, and his staff for assistance in preparing this report, and to my colleague, Professor Hector Williams, for supplying photographs of the obverse and reverse of no. 18 and the obverse of no. 16.

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A GOLD DINAR OF THE SASANIAN QUEEN BURAN



ROGER KUNTZ AND WILLIAM B. WARDEN, JR.

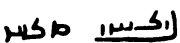
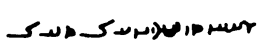
By the courtesy of the Museum of Fine Arts, Boston, Massachusetts, and through the kindness of Mr. Timothy Kendall, we are permitted to publish a heretofore undocumented issue in gold of the Sasanian Queen Buran¹ who ruled the Persian Empire in A.D. 630–31. Very little is known of this queen other than the fact that she was the daughter of Khusro II, and sister of Kavad II and Ardaser III. She succeeded Ardaser III to the throne and appears to have concluded a treaty of peace with the Byzantine Emperor Heraclius.



¹ F. D. J. Paruck, *Sasanian Coins* (Bombay, 1924), p. 117, mentions a gold coin of Buran, but it is actually a silver drachm. The references he gives are obscure, and there seem to be problems with the dates of the publications he cites.

Buran, *A'* dinar regnal year 2 = A.D. 630, with no mint name.²

Obv. Full face portrait of queen, with crown surmounted by spreading wings enclosing globe with smaller globe on top;³ crown adorned with three rosettes and two dotted borders; star to either side; queen's hair plaited in tresses at either side of face flowing down in front of bust; pendant of pearls for breast ornament, crescent and star on either shoulder; to l. of bust,  = 'pzw; to r.  = *bwl'nw* = Buran.⁴

Rev. Queen, standing, robed, wearing same crown as on obv.; crescent and star to either side of face; flowing ribbons to either side of body; to l. of body  = *bwl'nw TLYYN* (for *TLYN*)⁵ = Buran, two; to r.  = . . . *ntw GDH nyw bwl'l*.

Museum of Fine Arts Collection, 35–272,⁶ 26 mm and 4.390 g.⁷

This is the first example of a coin struck in gold by any of the successors of Khusro II.⁸ It is remarkable in that it features our only

² According to F. D. J. Paruck, "The Drachm of the Sassanian Queen Bōrān," *JASB* 13 (1917), *Num. Suppl.* 28, p. 43–45, the so called "regnal years" appearing on the coins were reckoned according to the calendar and not from the date of succession. Thus, a monarch who began his reign two months prior to the end of the calendar year would enter his second regnal year at the end of the second month. According to many historians, Buran probably reigned for only 16–17 months.

³ We expect Prof. Robert Göbl, Director of the Institut für Numismatik of the University of Vienna, to publish a more detailed crown synopsis in the near future.

⁴ The inscription reads 'pzw *bwl'nw*, literally "increase, Buran," but the two are not connected since the first word on the left is a pious wish to be bountiful or to increase, while the second word to the right is her name.

⁵ *TLYN* in Middle Persian is the ideogram *dō* = "two."

⁶ The coin was acquired by the Museum of Fine Arts in 1935 as part of a lot of five Sasanian gold coins donated anonymously to honor the memory of Zoe Wilbour.

⁷ The coin has been worn as jewelry and has been mounted with a loop, thus it is hard to estimate the actual weight, but we think ca. 4.2 g, as in coins of her predecessors. See Robert Göbl, *Sasanian Numismatics* (Braunschweig, 1971), pp. 27–29.

⁸ Göbl, p. 54.

known frontal portrait of this queen and her crown. In this respect, it is similar to the earlier gold issues of her father's regnal years 33 and 34.⁹ The queen is wearing a totally new crown not found on any examples of her rare silver coinage.¹⁰

The reverse inscription to the right side of the standing figure is a bit enigmatic. Especially the first word, which is either an adjective or possibly a word ending in *ntw*, meaning "attested, or declared"? Then follows *GDH nyw bwl't'l* (= "farn nēv Burdār") which can be translated as "good bearer of glory,"¹¹ probably copied from the coins of her father which have "maker of the world without fear."

We look forward to seeing contributions by other experts in this field as to the inscription and the iconography of this queen's rather enigmatic gold issue.

⁹ Göbl, p. 80 and pl. 14, coins 220 and 221, type combination V/6 and VI/7.

¹⁰ We wish to thank Prof. Robert Göbl for confirming that this is a new variety of crown for this queen, and for help in our initial research for this article.

¹¹ We also would like to thank Prof. Richard Frye of Harvard University for his generous assistance in deciphering the Middle Persian inscription on this coin. In a letter he says, "It is also possible to assume that one letter fell away in the last line and one could read *GDH (-i) nyk bwl't'l* (*nyk* for the older *nywk*) and interpret this as "bearer of good fortune," although I feel this is a modern interpretation read back to Sasanian times as "good fortune."

**THE STRUGGLE FOR SYRIA AND MESOPOTAMIA
(330-58/941-69)
AS REFLECTED ON ḤAMDĀNID
AND IKHSHĪDID COINS**

RAMZI JIBRAN BIKHAZI

Medieval historians, as a rule, give scant attention to provincial areas, particularly when the events concerned are of a transitional nature. In the first half of the fourth/tenth century, a transitional period, Syria and Mesopotamia were "provincial," and the literary sources treat them in a gloss. The numismatic evidence is fortunately a supportive source of information which on close examination yields many useful clues.

During the middle decades of the fourth/tenth century, Syria and Mesopotamia were the theater of a complicated struggle in which local and regional policies did not follow a neat pattern. This inconstancy was due to three important facts. First, the breakdown of the 'Abbāsid empire caused ideological disorientation as well as political disarray, hence realistic policy sometimes lost out to outdated dogma. Second, the Fāṭimids, the Buwayhids, and the Byzantines, all of whom had interests in the region, did not consistently push their claims, as they were sometimes hindered by domestic problems. And third (partially a result of the first two), the balance of power made several dramatic shifts, the most unforeseen of which was the decline of Ikhshīdid Egypt after 336/947 from a regional power to a dependency of the Fāṭimids.

THE ḤAMDĀNIDS, THE IKHSHĪDIDS,
AND THE 'ABBĀSID CALIPHATE, 324–33/936–44

Despite al-Muqtadir's disastrous reign (295–320/908–32) and the attendant breakdown of the 'Abbāsid government, the 'Abbāsid caliphate enjoyed a residual political influence which survived for almost two decades. The struggle of al-Muqtadir's immediate successors to save the caliphate was the central issue around which revolved the foreign policies of Mosul, Egypt, and, of course, Iraq.

Nāṣir al-Dawla, the Ḥamdānid emir of Mosul, regarded the caliphate with mixed feelings rooted in the history of his family. The Ḥamdānid emirate of Mosul was a tribal chieftdom with no regular army and little ability to defend itself against a powerful neighbor. Its independence had become an accomplished fact in the early 320s/930s as a result of the 'Abbāsid government's inability to hold on to Mesopotamia. Since economic chaos and agricultural deterioration were among the root causes of Iraq's weakness, it was moreover to be expected that the reforming caliphs would be anxious to regain control of Mesopotamia's rich agricultural resources.

Nāṣir al-Dawla fought twice to defend the Ḥamdānid emirate against the Caliph al-Rāḍī (in 323/935 and again in 327/938). But what he feared most was the alien military class of Iraq and, beyond that, the unfathomable and still more alien Buwayhids of Persia. Against these two forces Nāṣir al-Dawla was helpless. He could not overthrow the military class of Iraq any more than he could stop the Buwayhids in their tracks. But he could hope that the one would keep the other in check. With Ḥamdānid interests dependent on the balancing of these two potential enemies, Nāṣir al-Dawla hoped that the caliphate would remain strong enough to temper the militarism of Iraq and rally the anti-Buwayhid forces, but not grow so strong as to pose a threat to Mesopotamia's independence.

Nāṣir al-Dawla's interest in the political survival of the caliphate was one of two determining factors in his policy in another area of vital interest, northern Syria. The continued stability of the emirate of Mosul necessitated a policy of expansion in northern Syria both to circumscribe the unruly migratory tribes of the Euphrates region, which

threatened the tribal balance in Mesopotamia,¹ and to acquire a military outpost against the Byzantine empire. Nāṣir al-Dawla's younger brother, Sayf al-Dawla, advocated this policy of expansion in the expectation that Syria would be his prize. Legally, however, the Ḥamdānids possessed no claim to Syria that the 'Abbāsīd caliphs recognized. Nāṣir al-Dawla, therefore, could not both uphold the authority of the 'Abbāsīd caliphate and authorize his brother to annex northern Syria. The other important factor concerning northern Syria was that the powerful Ikhshīdids of Egypt were currently interested in extending their influence over the country and would undoubtedly parry any attempt by the Ḥamdānids to lay claim to it.

Egypt was a relatively stable country with little cause for worry about current events in Iraq. But Egypt's autonomous governor al-Ikhshīd, inspired by the deterioration of political and public order in Iraq, was taken by the notion of becoming the protector of the 'Abbāsīd caliph. For almost a decade (from ca. 324/935 until 333/944) Egypt's foreign policy was determined by al-Ikhshīd's hope to induce the 'Abbāsīd caliph to abandon Baghdad and take up a new capital in Syria under Ikhshīdīd protection.

During this decade, the idea of moving the caliphate away from Iraq gained some adherents at the 'Abbāsīd capital. As early as 324/936, the caliphal guard was driven to near mutiny by rumors that the Caliph al-Rāḍī intended to leave for Mosul.² The sources do not connect al-Ikhshīd with these events, but a letter sent to al-Ikhshīd by the Fāṭimid caliph al-Qā'im shortly after the abortive Fāṭimid attack on Egypt in 324/936 very strongly suggests that this was indeed the case.

¹ Abū al-Qāsim ibn Ḥawqal, *Kitāb Ṣurat al-Ard*, ed. J. H. Kramers, 2nd ed., 2 vols., Bibliotheca Geographorum Arabicorum (Leiden: Brill, 1938-39), 1, pp. 226, 228; Ibrāhīm b. Muḥammad al-Iṣṭakhrī, *Al-Masālik wa al-Mamālik*, ed. M. J. A. al-Ḥusaynī and Sh. Ghurbāl (Cairo: Al-Idāra al-'Āmma lil-Thaqāfa, 1961), p. 54; cf. M. Canard, *Histoire de la dynastie des Ḥ'amdānides de Jazīra et de Syrie* (Algiers: Publications de la Faculté des lettres d'Alger, 1951), pp. 575-76.

² Muḥammad b. Yahyā al-Ṣūlī, *Akhbār al-Rāḍī billāh wa al-Muttaql lillāh*, ed. J. Heyworth-Dunne (Cairo: Maḥba'at al-Ṣāwī, 1935), p. 53. This incident should be compared with al-Ṣūlī's account of al-Rāḍī's expedition of 327/938 against Mosul, pp. 108ff., especially pp. 108-15. Many persons opposed the expedition because they suspected that al-Rāḍī intended to abandon Baghdad.

In this letter, which Ibn Sa'īd preserves verbatim,³ al-Qā'im reminded al-Ikhshīd how the 'Abbāsids had failed to heed his advice, trust his promises, or even reward him for his faithfulness. We know of nothing in contemporary 'Abbāsīd-Ikhshīdīd relations which warrants this statement. Al-Rāḍī, to be sure, was to appoint Ibn Rā'iq in Ṣafar 327/December 938, as governor of Diyār Muḍar and northern Syria, and Ibn Rā'iq's subsequent activities were to give al-Ikhshīd cause for umbrage. But al-Qā'im's statement could hardly refer to Ibn Rā'iq's appointment, for Ibn Sa'īd is clear that this letter arrived some two years earlier, when Ibn Rā'iq still held the office of *amīr al-umarā'* in Baghdad.

The most plausible explanation of al-Qā'im's statement is that al-Ikhshīd had offered to house the 'Abbāsīd caliphate and had been repulsed by al-Rāḍī, who then created the office of *amīr al-umarā'* and raised Ibn Rā'iq to power in a radical move to bring stability to Iraq. Al-Ikhshīd's offer would not have only evoked al-Qā'im's derisive words but would have also been cause enough to make him try a countermove. Indeed, the primary object of the Fāṭimid caliph's letter was to invite al-Ikhshīd to recognize Fāṭimid suzerainty. Al-Qā'im, the letter said, would not press al-Ikhshīd to embrace the Fāṭimid creed; he would be satisfied if al-Ikhshīd were to recognize his primacy as though he, al-Qā'im, were a senior member of al-Ikhshīd's family.

Ibn Rā'iq arrived in Syria in 327/939. He had been toppled by Bajkam, the commander of Baghdad's elite army corps, and had subsequently been appointed by al-Rāḍī as governor of Aleppo and Diyār Muḍar. Ibn Rā'iq marched into Ramla, overstepping his terms of appointment, and al-Ikhshīd, after waiting in vain for an explanation from Baghdad, decided in a fit of anger to accept al-Qā'im's offer.⁴

³ 'Alī b. Mūsā ibn Sa'īd al-Andalusī, *Al-Sifr al-Rābī' min Kitāb al-Mughrib fi Hulā al-Maghrib*, ed. K. L. Tallquist (Leiden: Brill, 1899), pp. 25-26.

⁴ Ibn Sa'īd, pp. 26-28; Muḥammad b. Yūsūf al-Kindī, *Kitāb al-Wulāt wa Kitāb al-Qudāt*, ed. R. Guest, E. J. W. Gibb Memorial Series 19 (Beirut: Maṭba'at al-Ābā' al-Yāsu'iyyīn, 1908), pp. 288-89. For the terms of Ibn Rā'iq's appointment see Aḥmad b. Muḥammad Miskawayh, *Kitāb Tajārib al-Umam*, in *The Eclipse of the 'Abbāsīd Caliphate: Original Chronicles of the Fourth Islamic Century*, ed. and tr. H. F. Amedroz and D. S. Margoliouth, 7 vols. (Oxford: B. Blackwell, 1920-21), 2, pp. 408-9; *Kitāb al-'Uyūn wa al-Ḥadā'iq fi Akhbār al-Ḥaqā'iq*, ed. O. Saīdī (Damascus: Institut français de Damas, 1972-73), vol. 4, pt. 1, p. 329.

The Ikhshīdīd army had meanwhile engaged Ibn Rā'iq in an intermittent war in which it achieved various indecisive victories until it was stalled at al-Lajjūn in Palestine. An agreement was finally reached at the end of 328/late 940, by the terms of which al-Ikhshīd relinquished Damascus and northern Syria to Ibn Rā'iq, and retained Palestine against the payment of an annual sum of money.⁵ Mollified by this agreement, al-Ikhshīd retracted his decision to recognize the Fātimid caliph.

The sources do not give us the slightest hint that this agreement was anything but a quid pro quo in Syria. One year later, however, when Ibn Rā'iq returned to the office of *amīr al-umarā'* in Baghdad, al-Ikhshīd appears to have assumed that his chances of convincing the 'Abbāsīd caliph to move to Syria had improved. An Ikhshīdīd embassy of undisclosed intent left for Iraq soon after Ibn Rā'iq had regained power in the 'Abbāsīd capital.⁶ By the time it arrived, however, the caliph (now al-Muttaqī) and Ibn Ra'iq were in flight, driven forth by Iraq's war lords, and Ibn Rā'iq was determined to take the caliph to Syria. This circumstance suggests that the agreement of 328 included at least a tentative understanding between al-Ikhshīd and Ibn Rā'iq to transfer the 'Abbāsīd capital to Syria.

We know in retrospect that neither al-Rāḍī nor his successor al-Muttaqī gave serious thought to al-Ikhshīd's aspirations; but contemporaries who lived day by day through the difficult events of 329-32/940-44, could not rule out the possibility that al-Muttaqī might resign himself to the Ikhshīdīd option. Al-Ikhshīd's policy was specially opposed by the Ḥamdānids. To the Ḥamdānids, the caliphate was of little use unless it remained in Iraq. Relocated to Syria, it might indeed prove inimical to their interests by impelling al-Ikshhīd to extend his authority into the sensitive Euphrates region, where the establishment of strong rule would inevitably accelerate the eastward migration of nomadic tribes. Al-Ikhshīd's policy therefore forced Nāṣir

⁵ Kindī (above, n. 4), pp. 289-90; Ibn Sa'īd (above, n. 3), pp. 28-29; Jamāl al-Dīn ibn Taghribirdī, *Al-Nujūm al-Zāhira fī Mulūk Miṣr wa al-Qāhira*, 16 vols. (Cairo: Maṭba'at Dār al-Kutub al-Miṣriyya, 1929-72), 3, pp. 252-53.

⁶ Ṣūfī (above n. 2), p. 225; *K. al-'Uyūn* (above, n. 4), vol. 4, pt. 2, p. 375.

al-Dawla to become much more involved in the affairs of the caliphate than he would have otherwise desired.

The earliest extant Ikhshīdīd coins were struck in 329/940, the very year that the Amīr al-Umarā' Bajkam had introduced his name on the coinage of Iraq.⁷ Al-Ikhshīd, who did not recognize the overlordship of the *amīr al-umarā'*, seems to have intended this step as a reminder that he held office under the caliph's sole authority.

For the Ḥamdānids, it was not politic to take a principled stand on the coinage. A necessity of Nāṣir al-Dawla's policy until 330/942 was to avoid legal disputes with the regimes of Iraq. A rejoinder to Bajkam in the manner adopted by al-Ikhshīd would have been incompatible with this low profile.

It was therefore more than a year later, and only when circumstances had forced him to accept the office of *amīr al-umarā'* (Sha'bān 330/April 942), that Nāṣir al-Dawla assumed the right of adding his name to the coinage. The early Ḥamdānīd coins were evidently not intended as dynastic issues but as 'Abbāsīd ones, with Nāṣir al-Dawla's state title included, as Bajkam's had been, in recognition of his rank in the central government of the caliphate. One might further note in support of this contention that Sayf al-Dawla was not cited on the coinage until, four months later, he had likewise received a state title and been promoted in rank.⁸

This point has to be emphasized because it has been all too easy to ascribe the wrong motives to Nāṣir al-Dawla's policy in 330, particularly in the territories seized by the Ḥamdānids three years later. Nāṣir al-Dawla had not coveted the office of *amīr al-umarā'*, nor did he subsequently manipulate his power of office to expand Ḥamdānīd possessions. Late in the previous year he had actually connived in Ibn Rā'iq's return to Baghdad and had furnished him with some financial assistance in the hope that he would be able to put an end to the disorders which raked Iraq after Bajkam's death in Rajab 329/April 941.⁹ What shook

⁷ J. Bacharach, "Al-Ikhshīd, the Ḥamdānids and the Caliphate: The Numismatic Evidence," *JAOS* 94 (1974), p. 362.

⁸ R. J. Bikhazi, "Ḥamdānīd Coins of Madīnat al-Salām, A. H. 330-331," in D. K. Kouymjian, ed., *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honor of George C. Miles* (Beirut, 1974), pp. 258, 269.

⁹ Bikhazi, p. 257.

Nāṣir al-Dawla's determination to stay on the sidelines was Ibn Rā'iq's flight to Mosul with the Caliph al-Muttaqī in tow only six months after returning to office. Ibn Rā'iq intended (against the caliph's desire) to proceed with al-Muttaqī to Syria, and put the caliphate under Ikhshīdīd protection there.¹⁰

This plan forced Nāṣir al-Dawla to liquidate Ibn Rā'iq and accept the office of *amīr al-umarā'*;¹¹ it is the backdrop against which the Ḥamdānīd coins of Syria as well as Nāṣir al-Dawla's Syrian policy in 330-31/942-43 must be seen. The task which faced Nāṣir al-Dawla on assuming office was not simply to return the caliph to Baghdad, but more urgently to curb al-Ikhshīd who, on hearing of Ibn Rā'iq's death, occupied Damascus and seemed ready to implement his plan by force. Nāṣir al-Dawla's first priority, even while he prepared to march on Iraq, was to bring Diyār Muḍar and northern Syria under direct rule and thereby block all practicable routes between Syria and Iraq. Once occupied, the mints of these territories were made to cite the Ḥamdānīds on the coinage, but this was only in the spirit that impelled Nāṣir al-Dawla to assume the right of coinage in Iraq. During the next year Nāṣir al-Dawla made no attempt to incorporate Diyār Muḍar and northern Syria into the Ḥamdānīd domain any more than he did so with Iraq. His administration outside the Ḥamdānīd domain was staffed by 'Abbāsīd functionaries, not Ḥamdānīd ones.¹²

The guiding principles of Ḥamdānīd policy towards the caliphate underwent only a slight change after Nāṣir al-Dawla had given up the office of *amīr al-umarā'* in Sha'bān 331/April 943. Iraq's many problems made him lose faith in the caliphate's political future, but he did not abandon the view that the caliph should remain in Baghdad. The Ḥamdānīd policy of keeping the caliph in Baghdad had not been dictated solely by Nāṣir al-Dawla's concern about the caliphate's survival; it had equally been determined by his fear of what might ensue from setting up the caliphate in Syria. Back in Mosul, Nāṣir al-Dawla was

¹⁰ See the conversation between Ibn Rā'iq and al-Muttaqī in *K. al-'Uyūn* (above, n. 4), vol. 4, pt. 2, p. 368 (after Dhukā the chamberlain, an eyewitness).

¹¹ Nāṣir al-Dawla did not order the killing of Ibn Rā'iq until he had failed to dissuade him from his plan. *K. al-'Uyūn*, vol. 4, pt. 2, pp. 371-72 (after Dhukā); Miskawayh (above, n. 4), 2, pp. 27-28.

¹² Canard (above, n. 1), pp. 428-40, 490-92.

still careful not to fly unnecessarily in the face of caliphal authority. He laid no claim to northern Syria or any other territory to which he had no title. Nevertheless, having lost faith in the caliphate's power to hold back the Buwayhids, he no longer felt the need to maintain a deferential attitude towards the caliphate's military mentors. On the contrary the prospect of a Buwayhid takeover of Iraq impelled him to assert his dynastic rights by making a clear distinction between his loyalty to the caliph and his attitude to the government of Baghdad. Accordingly, he retained the right to cite himself and his brother on the coins issued in the Ḥamdānīd principality.

Al-Muttaqī's second flight from Baghdad, in Ṣafar 332/October 943, proved more embarrassing to the Ḥamdānīds than the first. The caliph left Baghdad under the illusion that the Ḥamdānīds would send forces to overthrow Tūzūn, the new *amīr al-umarā'*, and was greatly surprised to discover that Nāṣir al-Dawla had no such intention.¹³ Disappointed with the Ḥamdānīds, al-Muttaqī seemed to fall under the influence of the pro-Ikhshīdīd party at court. He appealed to al-Ikhshīd for help and presently invited him to a meeting at Rakka. In this awkward situation, Nāṣir al-Dawla was determined to restore al-Muttaqī to Baghdad without either taking an active part in the matter or subjecting the caliph to unnecessary humiliation.¹⁴ But Tūzūn, who smarted at Nāṣir al-Dawla's refusal to recognize his overlordship and desperately wanted the caliph back, was more inclined to fight the Ḥamdānīds than to settle amicably. Hence, while Nāṣir al-Dawla bore the blunt of Tūzūn's backlash and sought ways to settle the issue with him, he had to undertake military action in Syria to delay contact between the caliphal party and al-Ikhshīd.

The army which Nāṣir al-Dawla sent into Syria was not meant to annex the country (an impossible task under the circumstances) but simply to delay al-Ikhshīd's advance to Rakka and give Nāṣir al-Dawla enough time to negotiate a settlement with Tūzūn. Nāṣir al-Dawla

¹³ Ṣūlī (above, n. 2), pp. 246–48; Muḥammad b. 'Abd al-Malik al-Hamadhānī, *Takmilat Ta'rikh al-Ṭabarī*, ed. A. Kan 'ān, 2nd ed. (Beirut: Impr. Catholique, 1961), p. 136; 'Izz al-Dīn ibn al-Athīr, *Al-Kāmil fī al-Ta'rikh*, 13 vols. (Beirut: Dār Ṣādir, 1965–66), 8, p. 407.

¹⁴ Ṣūlī, pp. 256, 258; Miskawayh (above, n. 4), 2, pp. 49–50; Hamadhānī, p. 138.

entrusted the expedition to his cousin al-Ḥusayn b. Saʿīd, who had little political ambition, rather than to his more ambitious brother Sayf al-Dawla. I do not believe that al-Ḥusayn b. Saʿīd assumed administrative functions in Syria, and disagree with Bacharach's suggestion that he might have been responsible for two ʿAbbāsīd dirhams of uncertain date struck in Emessa and Tiberias in the name of al-Muttaqī.¹⁵ The purport of Bacharach's argument is that al-Ḥusayn b. Saʿīd issued these ʿAbbāsīd dirhams (rather than Ḥamdānīd ones) to demonstrate that he wished to honor Nāṣir al-Dawla's treaty of 1 Shawwāl 332/27 May 944 with Tūzūn, which had defined the limits of the Ḥamdānīd territories. Al-Ḥusayn, in fact, set out for Syria on 1 Rajab 332/28 February 944.¹⁶ The Ḥamdānīd war against Tūzūn was at its height and the treaty still three months in the future.¹⁷ Al-Ḥusayn did not advance as far as Tiberias; he reached Emessa briefly and turned back to Aleppo almost certainly before Nāṣir al-Dawla and Tūzūn had concluded the treaty.¹⁸ He could have hardly controlled much of the country outside the army camp. Many Ikhshīdīd supporters, however, decamped as he approached;¹⁹ and the two ʿAbbāsīd coins in question (like a few others to be discussed) probably represent the unsupervised minting activities of local authorities in Emessa and Tiberias, reflecting their preference for ʿAbbāsīd rule.

While al-Ḥusayn b. Saʿīd campaigned in Syria, Sayf al-Dawla kept a close watch on the caliph, who awaited al-Ikhshīd at Rakka. Al-Ikhshīd approached Rakka at the end of 332/944, heralded by al-Ḥusayn b. Saʿīd's retreating army, and Sayf al-Dawla retired to Haran, 80 kilometers due north, where he was presently joined by his cousin. Sayf al-Dawla's sojourn in Rakka and Haran is marked by Ḥamdānīd coins for 332 from both towns.²⁰

¹⁵ Bacharach (above, n. 7), nos. 42, 44, and discussion p. 364.

¹⁶ Şūlī (above, n. 2), p. 256.

¹⁷ For the date of this treaty (1 Shawwāl 332/27 May 944) see Şūlī, p. 258.

¹⁸ *K. al-ʿUyūn* (above, n. 4), vol. 4, pt. 2, pp. 397-98. The exact date of al-Ḥusayn's return to Aleppo, however, is not given.

¹⁹ *K. al-ʿUyūn*, vol. 4, pt. 2, pp. 397-98; cf. Ibn Saʿīd (above, n. 3), p. 32.

²⁰ U. S. Linder-Welin, "Sayf al-Dawlah's Reign in Syria and Diyarbekr in the Light of the Numismatic Evidence," *Commentationes de nummis saeculorum*, IX-XI, in *Suecia repertis* (1961), 1, nos. 2, 3, and discussion p. 41. See also Canard (above, n. 1), pp. 498-99.

COIN TYPES

Except for citing al-Ikhshīd, the early Ikhshīdīd issues adhered to the established 'Abbāsīd format. It was only in 336/947, that al-Ikhshīd's successors departed from this practice by adding the 'Alīd legend *Ṣallā Allāhu 'alayhi wa 'alā ālihi* after the *kalima* on the reverse. Even then they continued to follow the 'Abbāsīd format in other respects.

Nāṣir al-Dawla's coins adhered likewise to the conventional 'Abbāsīd type. The place of honor beneath the caliph's name on the reverse was reserved for Nāṣir al-Dawla, while Sayf al-Dawla was cited on the obverse. The coins of the Mosul emirate, issued mainly in Mosul city and Niṣībīn, retained this format until Sayf al-Dawla's death in 356/967.

During the lifetime of Nāṣir al-Dawla and Sayf al-Dawla, when the Ḥamdānīds observed the appearances of family solidarity, the coinage of Sayf al-Dawla's mints in northern Syria, Diyār Bakr, and Diyār Muḍār, followed roughly the format laid down by Nāṣir al-Dawla in 330. Nevertheless significant divergences occurred from time to time. The 'Alīd legend *Ṣallā Allāhu 'alayhi wa 'alā ālihi* appears on a large number of Sayf al-Dawla's coins after the *kalima* on the reverse. A few coins contain one or more of three uncommon Qur'ānic legends, namely, *Qur'ān* 30:3 mixed with 30:11 or 13, *Qur'ān* 9:34 mixed with 28:68 or 23:93, and *Qur'an* 9:34, sometimes in addition to the usual *Qu'ān* 9:33 and 30:3-4 (for the wording and translation of these legends see pp. 171-72). In layout, Sayf al-Dawla's most important departure from Nāṣir al-Dawla's format was an extra-marginal legend citing Nāṣir al-Dawla and Sayf al-Dawla; but only a few coins bear this extra-marginal inscription.²¹

In his earliest issues (1-5) Nāṣir al-Dawla published his full proper name "al-Ḥasan b. 'Abd Allāh" beneath his state title; but this was replaced in all subsequent issues by the *kunya* "Abū Muḥammad." Sayf al-Dawla's state title, when it appeared on the coinage a few

²¹ See Linder-Welin, p. 63.

months later, included the *kunya* "Abū al-Ḥasan." The son whom Nāṣir al-Dawla actually prepared for the succession was not Muḥammad, however, but Abū Taghlib Faḍl Allāh al-Ghaḍanfar, born ca. 318/930.²² It therefore seems fairly obvious that Nāṣir al-Dawla's object of crowding the *kunyas* on the coinage was to make a display of religious creed rather than lay down the order of succession. Nāṣir al-Dawla and Sayf al-Dawla were, by their proper names, the namesakes in inverse order of the first two Shī'ite imāms, 'Alī and al-Ḥasan, who likewise bore the *kunyas* Abū al-Ḥasan and Abū Muḥammad.

Whether the *kunyas* in question also represent the names of Nāṣir al-Dawla's and Sayf al-Dawla's first male issue cannot be established conclusively, but I am inclined to believe they do. Al-Fāriqī, who provides us with the only complete list of Nāṣir al-Dawla's male issue, puts Abū al-Qāsim first and Muḥammad and Abū Taghlib in second and third place respectively, but does not state whether his list is arranged in order of age.²³ Ibn Zāfir's list of Sayf al-Dawla's sons, which is arranged by age,²⁴ is not helpful either, because Sayf al-Dawla's eldest son (who pre-deceased Sayf al-Dawla by two years) is known to us only by his cognomen, Abū al-Barakāt. Freytag, relying on a source which he does not acknowledge, and followed in turn by Canard, maintains—without explaining the numismatic evidence—that Abū Taghlib was Nāṣir al-Dawla's eldest son. Muḥammad he places among Nāṣir al-Dawla's younger sons without suggesting his age.²⁵

Very little is known about Muḥammad b. Nāṣir al-Dawla, but of his age one thing seems certain: in 338/949, when Abū Taghlib was twenty, Muḥammad was likewise a grown man, for he deputized for Sayf al-Dawla in Aleppo while the latter made a lengthy trip in Mesopo-

²² See Aḥmad b. Yūsūf ibn al-Azraq al-Fāriqī, *Ta'riḫ Mayyāfāriqīn* (British Museum MS. Or. 5803), fol. 111a.

²³ *Ta'riḫ Mayyāfāriqīn*, fol. 114b.

²⁴ Jamāl al-Dīn ibn Zāfir, *Kitāb Akhbār al-Zamān fī Ta'riḫ Banī al-'Abbās (Al-Duwal al-Munqaḥi'a)* (British Museum MS. Or. 3685), fol. 11b.

²⁵ G. W. Freytag, "Geschichte der Dynastien der Hamdaniden in Mosul und Aleppo," *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 10-11 (1856-57), 10, pp. 441, 485, and table p. 440; Canard (above, n. 1), pp. 541-42.

tamia.²⁶ After that we hear no more of Muḥammad until Sayf al-Dawla gives him a commanding position in the army of Aleppo in 348/959.²⁷ What prompted Sayf al-Dawla to rescue Muḥammad from obscurity after a lapse of nine years is, again, left unstated, but the reason appears to bear more than a coincidental relationship to the family quarrel which pitted the two Ḥamdānid courts against each other earlier that year. This family quarrel gave Sayf al-Dawla good reason to feel uneasy about Abū Taghlib's growing influence in Mosul. His sudden promotion of Muḥammad was probably intended as a challenge to Abū Taghlib's right of succession.

None of this proves that Muḥammad and al-Ḥasan were Nāṣir al-Dawla's and Sayf al-Dawla's eldest sons. It nevertheless appears hardly reasonable that Sayf al-Dawla would use Muḥammad to contest Abū Taghlib's right of succession if the man did not have the right of premogeniture: he would have more likely fallen back on his own tribal right of seniority. It is to be expected, at any rate, that the religious considerations which impelled the brothers to publish these *kunyas* on the coinage had likewise determined their choice of names for their first male issue. Whatever the case, the format which Nāṣir al-Dawla devised for Ḥamdānid coins managed to convey a Shī'ite persuasion without actually flouting the Sunnī caliph's claim of being the only legitimate head of the community.

THE BUWAYHID OCCUPATION OF BAGHDAD

On 21 Jumādā II 334/28 January 946, barely a week after occupying Baghdad, Mu'izz al-Dawla overthrew the Caliph al-Mustakfī and raised al-Muṭī'. This event was greatly deplored in the lands of the 'Abbāsid caliphate for it seemed to confirm a widespread belief that the Buway-

²⁶ Yaḥya b. Sa'īd al-Anṭākī, *Ta'riḫ*, ed. I. Kratchkovsky and A. Vasiliev, 2 vols. (Paris: Patrologia Orientalis 18 and 23, 1932), 18, p. 767; Kamāl al-Dīn ibn al-'Adīm, *Zubdat al-Ḥalab min Ta'riḫ Ḥalab*, ed. S. Dahhan, 3 vols. (Damascus: Institut français de Damas, 1951-68), 1, pp. 120-21.

²⁷ Hamadhānī (above, n. 13), p. 178; Muḥammad b. Aḥmad al-Dhahabī, *Kitāb Ta'riḫ al-Islām al-Kabīr* (Bibliothèque Nationale MS. Ar. 1581), fol. 193b.

hid occupation of Baghdad would entail a fundamental change in the constitutional position of the caliphate. Several autonomous rulers refused to recognize the legality of this act and continued for varying lengths of time to strike coinage in the name of the deposed caliph.

The Ḥamdānids were more vulnerable to the change of regime in Baghdad than most of their contemporaries. Nāṣir al-Dawla instantly put his forces on a wartime footing and, in Ramaḍān 334/April 946 invaded Iraq, entered Baghdad, and engaged the Buwayhids in battle until the end of the year. During the three-month battle of Baghdad Nāṣir al-Dawla was in control of part of the capital and is reported to have operated the mint, using old dies from the period when he had occupied the office of *amīr al-umarā'* under the Caliph al-Muttaqī.²⁸ He took this measure in Baghdad undoubtedly because in the midst of battle it was difficult to make a die of his choosing. But in Mesopotamia, where there were no impediments, he struck coins in the name of al-Mustakfī (26, a Ḥamdānid coin of Mosul, 335 H. bearing the name of al-Mustakfī). This coin must have been struck during, or not much later than the end of, Muḥarram 335/August 946. At the end of Muḥarram, Nāṣir al-Dawla concluded a peace treaty with the Buwayhids and henceforth struck his coins in the name of al-Muṭī'.

In contrast to 26, there are two earlier Ḥamdānid issues which bear the name of the new caliph al-Muṭī' rather than the fallen al-Mustakfī (25, 55). These two coins were struck in 334 by the two mints under Nāṣir al-Dawla's direct control, Mosul and Nişibīn. Since Nāṣir al-Dawla in the latter part of that year rescinded the obligation of citing al-Muṭī' on Ḥamdānid coins, these two coins must have been struck during the three months between the accession of al-Muṭī' in Jumādā II and the outbreak of the Ḥamdānid-Buwayhid war in Ramaḍān. They suggest that Nāṣir al-Dawla was initially willing to recognize the change of caliph effected by Mu'izz al-Dawla. Nāṣir al-Dawla's reaction to the Buwayhid occupation must therefore be reconsidered in the light of these coins.

In the course of the 320s, the obvious weakness of most of the Daylamite chiefdoms dispelled much of the irrational fear earlier inspired by these people. In 334/945, the prospect of a Buwayhid takeover

²⁸ Bikhazi, pp. 260-61, 270-71.

of Iraq was less unpalatable to Nāṣir al-Dawla than years before. Twice before 334/945, Nāṣir al-Dawla had demonstrated his changing attitude toward the Buwayhids. In the fall of 331/942, while holding office in Baghdad, he had negotiated with Mu'izz al-Dawla a two-pronged attack against their common enemy, the Barīdis of southern Iraq²⁹ (who, incidently, were another bulwark against Buwayhid expansion); and in 333/944, when Tūzūn's deteriorating health made the Buwayhid occupation of Iraq a possibility, Nāṣir al-Dawla sent an embassy to Mu'izz al-Dawla in Fārs, bearing money and gifts.³⁰

By 334/945, Nāṣir al-Dawla was willing to acquiesce in a Buwayhid occupation of Baghdad, though not to the point of recognizing Buwayhid overlordship. When the Buwayhids entered Baghdad, Nāṣir al-Dawla struck the coins in the name of Mu'izz al-Dawla's protégé, the Caliph al-Muṭī', as a sign of good will, though leaving out Mu'izz al-Dawla's name, as he was always to do. Simultaneously, as a back-up measure, he made a well-publicized military build-up in Mosul. Mu'izz al-Dawla, as Nāṣir al-Dawla had feared, would not respond to friendly overtures without testing his other options: he was only too aware of Mesopotamia's economic importance to Iraq. Unlike the former Caliph al-Rāḍī, however, Mu'izz al-Dawla had little chance of winning grass roots tribal sympathy in Mesopotamia, and was fairly realistic about it. When the Ḥamdānids put up a determined fight in Baghdad, he eventually consented to an agreement which gave the Ḥamdānids their independence from the Buwayhid state but secured for Iraq its basic economic interest.³¹

THE BEGINNINGS OF THE ḤAMDĀNID EMIRATE OF ALEPPO

We must now go back two years in time to pick up the threads of Mosul's policy in northern Syria. Al-Muttaqī's return to Baghdad from

²⁹ Ṣūlī (above, n. 2), p. 233; Miskawayh (above, n. 4), 2, p. 37; Hamadhānī (above, n. 13), p. 130. The attack was not carried out, however.

³⁰ Fāriqī (above, n. 22), fol. 112a.

³¹ For the terms of this agreement, concluded in Muḥarram 335/August 946, see Miskawayh (above, n. 4), 2, p. 108.

the Rakka conference, his ignominious deposition by Tūzūn in Ṣafar 333/October 944, and the accession of the more tractable al-Mustakfī, inaugurated a new period in the history of the Ḥamdānid emirate. The political authority of the caliphate had received a severe blow from which it never really recovered; the possibility of removing the caliphate to Damascus was eliminated; al-Ikhshīd's interest in northern Syria instantly diminished; and the moral and political considerations which had prevented the Ḥamdānids from occupying northern Syria were gone. During the lull which preceded the Buwayhid takeover of Iraq, Nāṣir al-Dawla provided Sayf al-Dawla with financial and military assistance and set him on the road for Aleppo.

In 333/944 and for four years thereafter, the coins of Syria provide invaluable evidence about Sayf al-Dawla's policy objectives. They substantiate what the literary sources indicate by default, namely, that in 333 Sayf al-Dawla made no attempt to subjugate northern Syria, but considered Aleppo a stepping stone for the occupation of Damascus, which he intended to have as his capital.

Of particular interest are the *amīr al-umarā'* coins of Antioch, al-Maṣṣīṣa, and Emessa (105, 127, 140) and the 'Abbāsīd coin of Tarsus (125) all issued in 333. These must have been struck after Sayf al-Dawla's occupation of Aleppo since the country had earlier been ruled by representatives of al-Ikhshīd. With regard to the *amīr al-umarā'* coins, Bacharach suggests that they were struck by Sayf al-Dawla as a sign of compliance with the agreement which his brother and Tūzūn had concluded a few months earlier.³² This theory does not account for the above mentioned 'Abbāsīd coin of Tarsus; nor does it resolve Sayf al-Dawla's change of mind and shift to the Ḥamdānid type, which—in this same year—he struck in Aleppo and Emessa (80, 139); and, finally, it does not explain why another 'Abbāsīd coin should be issued in Antioch in 337 (108) fully four years after Aleppo had begun to strike Ḥamdānid coins.

The non-Ḥamdānid coins under study reflect the changing political map of northern Syria. Sayf al-Dawla entered Aleppo on 9 Rabī' I 333/30 October 944, and rode within two weeks to fight the Byzantines. He crossed the border at al-Maṣṣīṣa, but made no attempt to enforce

³² Bacharach (above, n. 7), p. 365.

his authority on Cilicia. Returning to Aleppo, he passed the winter of 333 doing nothing which the sources consider worth mentioning. Left to their own devices, the local mints opted for the 'Abbāsids with or without recognizing Tūzūn's ascendancy. The coins they issued suggest that northern Syria preferred the remote authority of the 'Abbāsids to the direct rule threatened alternately by the Ikhshīdids and the Ḥamdānids.

In the second half of the year, Sayf al-Dawla embarked on an ambitious plan of conquest which took him to the borders of Palestine. He defeated the Ikhshīdids near Emessa and marched into Damascus in Ramaḍān 333/April 945. Emessa began to issue Ḥamdānid coins (139) and it has been suggested that Filastīn did too.

Linder-Welin attributes a coin in the Bibliothèque Nationale to the mint of Filastīn, 333.³³ The coin, however, is anomalous in that it bears the name of the caliph al-Muttaqī even though Sayf al-Dawla had recognized his successor al-Mustakfī before setting foot in central Syria. Further, it is epigraphically different from other Filastīn coins, being quite similar to the contemporary issues of Rakka and Haran. This coin needs further study before inclusion in the corpus of Ḥamdānid coins from Filastīn.³⁴

Within a month of entering Damascus, Sayf al-Dawla was evicted by the Ikhshīdids and forced to withdraw to Rakka. Before the end of the year, he reached an agreement with al-Ikhshīd; under its terms he obtained the districts of Aleppo and Emessa in return for giving up his claims to the central and southern parts of Syria.

During 334/945, northern Syria belonged legally to Sayf al-Dawla, but how much of it came under effective rule is difficult to say. The literary sources are vague on this point and the numismatic evidence speaks only for Aleppo, Emessa, and Haran, all of which issued Ḥamdānid coins (81–84, 141, 148). The frontier districts appear to have

³³ Linder-Welin (above, no. 20), pp. 44, 6.

³⁴ Some time ago, Steve Album saw the coin and suggested to Michael L. Bates of the ANS that the mint is Wasit. Arlette Negre has provided a photograph of the coin, and Dr. Bates has compared it with a similar coin in the ANS collection. This coin had originally been attributed to Filastīn but was reattributed to Wasit by Album. Dr. Bates has concluded that the mint is correctly Wasit, based on the style of the epigraphy and the layout, and that the date is 331.

remained outside Sayf al-Dawla's authority. Tarsus, at any rate, did not recognize him until 335/946.³⁵ Antioch came under his authority in the early months of 335/946,³⁶ probably at the same time as Tarsus.

The death of al-Ikhshīd at the end of 334/mid 946, induced Sayf al-Dawla to make another attempt on Ikhshīdid Syria. He was routed near Damascus in the spring of 335/947, and retreated to Rakka. The Ikhshīdids entered Aleppo in Dhū al-Ḥijja 335/July 947, and for three months northern Syria declared for them. The Ikhshīdid coin of Emessa, 336 H. (142) must have been struck during this interval.

In Rabi' II 336/October 947, Sayf al-Dawla recaptured Aleppo and presently reached a new agreement with the Ikhshīdids which established him definitively in northern Syria. As in 334, the country did not instantly accept his authority. The literary sources offer a fairly clear idea of the opposition he encountered in the regions of Emessa and the Ḥadath-Marash-Ra'bān triangle. The numismatic evidence provides a piece of information which the literary sources overlook, namely, that Antioch did not return to him until a year later. In the meantime, it declared for the 'Abbāsids only. Antioch's return to the Ḥamdānids in 337/948, is marked by the occurrence of two coin types:

³⁵ 'Alī b. al-Ḥusayn al-Mas'ūdī, *Kitāb al-Tanbīh wa al-Ishrāf*, ed. M. J. de Goeje, Bibliotheca Geographorum Arabicorum 8 (Leiden: Brill, 1894), pp. 194–95; Dhabīb (above, n. 27), fols. 160a, 162a; Taghribirdi (above, n. 5), 3, pp. 293–94. Al-Mas'ūdī, in particular, gives the impression that recognition was granted when Sayf al-Dawla supervised the exchange of prisoners of Rabi' I 335/October 946. Cf. Athīr (above, n. 13), 8, p. 468; Canard (above, n. 1), pp. 758–60; Linder-Welin (above, n. 20), pp. 48–49; A. Toynbee, *Constantine Porphyrogenitus and His World* (London, 1973), pp. 499, 503–4.

³⁶ The date of Sayf al-Dawla's acquisition of Antioch can be roughly fixed in reference to the invitation which the poet al-Mutanabbī received from Abū al-'Ashā'ir, Sayf al-Dawla's governor for Antioch. See the historical introductions to the relevant poems by al-Mutanabbī in Abū al-Ṭayyib al-Mutanabbī, *Diwān Abī al-Ṭayyib al-Mutanabbī, wa fī Athnā' Malnihi Sharḥ al-Imām al-'Allāma al-Wāḥidī*, ed. F. Dietrici (Berlin, 1861), pp. 206, 316; *Diwān Abī al-Ṭayyib al-Mutanabbī*, ed. 'A. W. 'Azzām (Cairo: Maṭba'at Lijnat al-Ta'līf wa al-Tarjamah wa al-Nashr, 1944), pp. 123 and n., 195, 228 and n.; *Diwān Abī al-Ṭayyib al-Mutanabbī* (Bibliothèque Nationale MS. Ar 3091), fols. 86a–b. See also R. Blachère, *Un poète arabe du IV^e siècle de l'Hégire: Abou Ṭ-Ṭayyib al-Mutanabbī; Essai d'histoire littéraire* (Paris: Librairie d'Amérique et d'Orient, 1935), pp. 95ff.; 'Adīm (above, n. 26), 1, p. 118.

one 'Abbāsīd and the other Ḥamdānīd, both issued in Antioch in that year (108, 109).

One year after these events, Sayf al-Dawla augmented his domain still further by inducing Nāṣir al-Dawla to recognize his authority over Diyār Bakr and parts of Diyār Bakr and parts of Diyār Muḍar.

RELATIONS BETWEEN THE TWO BRANCHES OF THE ḤAMDĀNID DUAL PRINCIPALITY

Nāṣir al-Dawla, as head of the family, enjoyed a right of overlordship in Sayf al-Dawla's Mesopotamian territories by virtue of caliphal investiture first granted to the Ḥamdānids in 319/931. This much is faithfully reflected by the over-all format of Sayf al-Dawla's coins. But an important point which Sayf al-Dawla's coins do not reflect is that northern Syria belonged, legally, to the Ikhshīdids. It was granted to al-Ikhshīd and his progeny for a period of thirty years by al-Muttaqī at the Rakka conference of 14 Muḥarram 333/6 September 944, and the investiture was confirmed at intervals by al-Muttaqī's two successors, al-Mustakfī and al-Muṭī'.³⁷ Sayf al-Dawla's position in Syria was legitimized, in effect, by his treaties with the Ikhshīdids rather than by a caliphal patent. Nāṣir al-Dawla's title to northern Syria was even more dubious since it depended on Sayf al-Dawla's willingness to consider him party to these treaties.

It has been pointed out in the description of Ḥamdānīd coins that Sayf al-Dawla's coins differed from his brother's in some significant respects. Most of these differences resulted from specific events beyond Sayf al-Dawla's power or from minting practices peculiar to the territories of the Aleppo emirate; but other differences, of which the 'Alid legend is the most striking, cannot be put down to incidental causes.

While the *kunyahs* of Nāṣir al-Dawla and Sayf al-Dawla convey a simple statement of faith, the 'Alid legend is too flagrantly significant to be anything but an outright political statement. There are two things

³⁷ Yaḥyā (above, n. 26), 18, p. 735; 'Adīm (above, n. 26), 1, p. 107; Kindī (above, n. 4), pp. 290–91, 294; Taghribirdī (above, n. 5), 3, pp. 255–56; *K. al-'Uyūn* (above, n. 4), 2, pp. 460–61.

which make this legend difficult to explain. Although the Ḥamdānids were often ready to manipulate religion for political ends, their rule was less Shī'ite in character than that of their fellow Twelvers, the Buwayhids (who, incidentally, did not adopt the 'Alid legend). Secondly, the legend does not appear consistently on Sayf al-Dawla's coinage. There are some issues without it from every mint in the Aleppo emirate.

At one point I was inclined to connect these coins with the Ikhshīdīd issues which likewise juxtapose the 'Alid legend with the name of the 'Abbāsīd caliph; it seemed likely that Sayf al-Dawla found it politic on occasion to follow the Egyptian practice in recognition of the Ikhshīdīd right of overlordship in northern Syria. This explanation would have been valid had the 'Alid legend appeared simultaneously on both Ḥamdānīd and Ikhshīdīd coins. But whereas it appeared on Sayf al-Dawla's coins as early as 333/944, I have encountered no Ikhshīdīd coin of the same type predating 336/947—and that disposes of this explanation.

For a while, I also considered the possibility that the legend was meant to please the Qarmaṭian tribes of Syria and their coreligionists who inhabited and ruled Bahrain. The Ḥamdānids were eager to cultivate the friendship of the Qarmaṭians; but the absence of doctrinal agreement between the Twelver Shī'ites and the Qarmaṭians would have made a religious manifestation on the coins superfluous unless the Ḥamdānids were willing to recognize the overlordship of Bahrain, which they certainly were not. Moreover, the Ḥamdānids of Mosul were equally involved with the Qarmaṭians, yet they did not strike the 'Alid legend on their coins until well after the fall of Nāṣir al-Dawla in 356/967.

It is even less likely that these coins constitute evidence of a political understanding with the Fāṭimids. Relations between the Fāṭimids and Sayf al-Dawla, while hardly discussed by the sources, appear to have been far from amicable.³⁸ In a study of the Ḥamdānīd dynasty which I am currently preparing for publication, I shall suggest that the Caliph al-Mu'izz made an attempt around 346/957 to secure for him-

³⁸ See the statement attributed to the Fāṭimid caliph al-Mu'izz in ca. 358/969, in Aḥmad b. 'Alī al-Maqrīzī, *Al-Khiṭaṭ al-Maqrīziyyah al-Musammāt bil-Mawā'iz wa al-I'tibār bi-Dhikr al-Khiṭaṭ wa al-Āthār*, 4 vols. (Cairo: Al-Maḥiṭī, 1906-8), 2, p. 165. Cf. Canard (above, n. 1), p. 677.

self recognition in northern Syria, but in vain, and that this episode—perhaps along with others—made him feel that the Ḥamdānids were unreliable fellow travellers.

To return to the 'Alid legend, I finally reached the conclusion that it was adopted by Sayf al-Dawla simply to distinguish his coins from his brother's. It was, in other words, an occasional assertion of independence within the family, intended to fall short of outright secession.

That Sayf al-Dawla's assertion of independence should take this circuitous form is not surprising, for the factors involved defied a clear-cut arrangement. Sayf al-Dawla needed no reminder that the dynasty was more securely entrenched in Mosul than in the territories he himself held. This alone gave him a real interest in family solidarity and was sufficient to make him accept Nāṣir al-Dawla's primacy. Nevertheless, Sayf al-Dawla's function in the over-all Ḥamdānid political scheme (defending the border against Byzantium and policing the turbulent Euphrates region) set the Aleppo emirate on an independent course. Aleppo's military-political establishment did not merge well with Mosul's familial-tribal system. There was no administrative unity between the two emirates and little agreement on priorities. Sayf al-Dawla was torn between his interest in his family connections and the requirements of his position in Aleppo.

While the textual sources are largely silent on the subject, the numismatic evidence suggests that the political relations between Aleppo and Mosul sometimes verged on rupture. Sayf al-Dawla would sometimes remove Nāṣir al-Dawla's name from the coinage by either partially or completely leaving it off flan (90, 120–23, 126, 137).

In this numismatic war, Nāṣir al-Dawla was helpless. He could not retaliate in kind because Sayf al-Dawla's subsidiary place on the coins was a symbolic expression of Nāṣir al-Dawla's theoretical overlordship. The quarrels between the brothers expressed themselves only on Sayf al-Dawla's coins, with one exception: 89, struck in Aleppo in the name of al-Muṭī' and Nāṣir al-Dawla without citing Sayf al-Dawla. The date is uncertain, but I believe it was issued at the turn of 347–48/early 969, when Nāṣir al-Dawla was in temporary control of Aleppo.³⁹

³⁹ Linder-Welin (above, n. 20), p. 70, reads the year as possibly 340, but attributes the coin to 347 on historical grounds.

The events which led up to this had been set in motion by a change of policy in Baghdad. For more than a decade, Mu'izz al-Dawla had based his relations with the Ḥamdānids on a bilateral agreement solely with Nāṣir al-Dawla, who was more vulnerable than his brother to pressure from Baghdad. Nāṣir al-Dawla sometimes withheld the tribute from Baghdad, and Ḥamdānid-Buwayhid relations floundered each time this happened. Yet until 347/958, Mu'izz al-Dawla does not seem to have entertained the idea of regulating his relations with the Ḥamdānids except through Mosul. His official view was that the unity of the Ḥamdānid family bound Sayf al-Dawla to the terms contracted by Nāṣir al-Dawla.

In 347/958, Mu'izz al-Dawla suddenly abandoned this attitude. He occupied Mosul and Diyār Rabī'a on the pretext that Nāṣir al-Dawla had again defaulted on the tribute, and refused to settle with the Ḥamdānids except by agreement with Sayf al-Dawla. The Buwayhid emir, according to the sources, did not aim to dislodge Nāṣir al-Dawla; he had simply lost confidence in him and intended henceforth to deal solely with Sayf al-Dawla, whom he held in high regard.⁴⁰ In effect, Mu'izz al-Dawla intended to bring Aleppo into direct relationship with Baghdad.

Nāṣir al-Dawla had in fact withheld the tribute as was his habit whenever he thought he could. But there is reason to believe that Mu'izz al-Dawla's change of policy was precipitated by suspicions that Sayf al-Dawla was planing a deal with the Fāṭimid government. Sayf al-Dawla was presumably to recognize Fāṭimid suzerainty and the Fāṭimid caliph was to reciprocate by arranging for a much needed peace between Aleppo and Byzantium.⁴¹ As the protector of the 'Abbāsīd

⁴⁰ For the Ḥamdānid-Buwayhid conflict of 347-48/958-59, see Miskawayh (above, n. 4), 2, pp. 170-72, 174-75; Athīr (above, n. 13), 8, pp. 522-24; Abū Firās al-Ḥārith b. Sa'īd al-Ḥamdānī, *Dīwān Abī Firās*, ed. S. Dahhan, 3 vols. (Beirut: Impr. Catholique, 1944), 2, pp. 151-52 (comment on verse 212); Yaḥyā (above, n. 26), 18, p. 777; Fāriqī (above, n. 22), fol. 114b.

⁴¹ The evidence in question is contained in an account of a Byzantine embassy to the Fāṭimid court, by al-Qāḍī al-Nu'mān b. Muḥammad, *Al-Majālīs wa al-Musāyarāt wa al-Mawāqif wa al-Tawqī'āt*, published, translated and discussed by S. M. Stern, "An Embassy of the Byzantine Emperor to the Fāṭimid Caliph al-Mu'izz," *Byzantion* 20 (1950), pp. 239-58. Supportive evidence is provided by Mis-

caliphate, Mu'izz al-Dawla was obliged to abort this agreement. He could not hope to coerce Sayf al-Dawla, but he could hold Mosul in ransom until Sayf al-Dawla came to terms.

Whatever Mu'izz al-Dawla's motives, the crucial point for the Ḥamdānids was that his terms carried the adjunct that Sayf al-Dawla rather than Nāṣir al-Dawla would henceforth be regarded by Baghdad as head of the family. Nāṣir al-Dawla hung around in the unoccupied part of Mesopotamia for five months, willing to settle with the Buwayhids on all their terms except this. Towards the end of the year he repaired in person to Aleppo to dissuade Sayf al-Dawla from negotiating with Mu'izz al-Dawla.

In Aleppo, Nāṣir al-Dawla and his party seized every opportunity to flaunt their ascendancy in the face of Sayf al-Dawla and his court, and a series of unpleasant scenes occurred. Abū Taghlib's irritating inclination to dictate policy to his elders added fuel to the fire. The historical sources, however, miss the whole point of Nāṣir al-Dawla's ostentatious behavior. Nearly all of them maintain that he travelled to Aleppo to seek military assistance against the Buwayhids. (This actually was Abū Taghlib's idea, not Nāṣir al-Dawla's.)⁴² The continuous squabbling between members of the two courts is put down to arrogance on the part of the one and over-sensitivity on the part of the other. The one literary source that alludes to the question of primacy is the *Dīwān* of Abū Firās, prince of Manbij and cousin of the reigning emirs, who took Sayf al-Dawla's side in every family quarrel. In commenting on Nāṣir al-Dawla's haughtiness, Abū Firās submits that primacy should belong to the abler brother, Sayf al-Dawla.⁴³ But he does not go as far as to suggest that Nāṣir al-Dawla behaved haughtily because his primacy had been called in question to begin with; nor does he connect this behavior with the peace agreement which Sayf al-Dawla was even then negotiating with Mu'izz al-Dawla. The coin under discussion,

kawayh (above, n. 4), 2, p. 172, in his account of an embassy from Mu'izz al-Dawla the Buwayhid to the Ikhshīdīd court.

⁴² See two poems in al-Sariy al-Raffā', *Dīwān al-Sariy al-Raffā'* (Cairo: Maktabat al-Qudsi, 1355 A.H.), pp. 111–14. This poet was then in the employ of the Mosul Ḥamdānids, and was particularly attached to Abū Taghlib.

⁴³ Abū Firās (above, n. 40), 3, pp. 366–68 (no. 293), 416–17 n. (no. 336).

89, confirms that Nāṣir al-Dawla was not being pointlessly unpleasant or undecorous, but was simply eager to assert his primacy.

At the end of the year, with Nāṣir al-Dawla still in Aleppo, Sayf al-Dawla made a foray into Byzantium.⁴⁴ The raid was unimpressive as military operations go, and was probably intended only to assure Mu'izz al-Dawla that Sayf al-Dawla had no desire to suspend Holy War, and therefore had no reason to make a deal with the Fāṭimids. Nevertheless, considering that Aleppo's regular forces had suffered severe human losses earlier in the year,⁴⁵ the raid must have occupied a large proportion of what troops were still available. Sayf al-Dawla could not have left a big garrison in Aleppo, and it must have been possible for Nāṣir al-Dawla to seize the mint and issue the coins represented by 89.

NORTHERN SYRIA, BYZANTIUM, AND THE ḤAMDĀNIDS: THE LEGEND *QUR'ĀN* 9:34

Among the Ḥamdānid specimens that have come to my attention, the Qur'ānic legend 9:34, with its dire warning to those who hoard gold and silver instead of spending them in the service of God, occurs for the first time on issue 138 from the year 350/961, bearing the mint name *Thaghr al-Shāmiyya* (Syria's frontier city). Mrs. Linder-Welin has established on epigraphic grounds that this coin was issued in al-Maṣṣīṣa, in the autonomous frontier district Cilicia.⁴⁶ Following its appearance on this unique coin, the legend in question appears on all subsequent Ḥamdānid coins from al-Maṣṣīṣa (128-36). It also appears on coins from the mints of Aleppo and Emessa, both of which were usually under Sayf al-Dawla's direct authority. The Aleppo coin bears an uncertain date which could be read as 351 or 353, while the Emessa coins were undoubtedly struck in 363 (91, 145-47).

⁴⁴ Fāriqī (above, n. 22), fol. 114b.

⁴⁵ Sayf al-Dawla's losses were incurred during two battles against a Byzantine invading force led by John Tsimisces. Yaḥyā (above, n. 26), 18, p. 775; 'Adīm (above, n. 26), 1, pp. 127-28; Dhahabī (above, n. 27), fol. 193a; Hamadhānī (above, n. 13), p. 172.

⁴⁶ Linder-Welin (above, n. 20), pp. 78-80.

Cilicia had overcome its initial reluctance to recognize the Ḥamdānids not because Sayf al-Dawla intimidated it by force, but because the Byzantine military threat dictated a policy of close relationship with whoever governed northern Syria. The failure of the Ḥamdānids to provide the country with adequate protection subsequently led to a resurgence of opposition. Following the paralyzing military débacle which shattered Aleppo's forces in 349/960, Sayf al-Dawla drew fire from Tarsus's governor Ibn al-Zayyāt for negotiating for peace at the very moment Byzantium was preparing to reduce Anazarba and the network of fortresses which served as Cilicia's first line of defense. Unable to induce Aleppo to participate in Anazarba's defense, Ibn al-Zayyāt severed ties with Sayf al-Dawla, whom he accused of dealing with the enemy at Cilicia's expense, and rode out for the border at the head of Tarsus's army.⁴⁷

Outside Tarsus, the preponderant feeling in Cilicia was that while Sayf al-Dawla was incapable of standing up to Byzantium, there was nothing to be gained by breaking away from the Ḥamdānid emirate. Al-Maṣṣīṣa had lost heavily during the previous year's fighting and its governor, loyal to Sayf al-Dawla, was able to keep the populace under control. But when Ibn al-Zayyāt revealed the extent of the danger which threatened Anazarba, the citizens of al-Maṣṣīṣa likewise revoked their allegiance to Sayf al-Dawla and sent their enfeebled force to serve under Ibn al-Zayyāt in the defense of the border.

After the rout of the Cilician forces near Anazarba, al-Maṣṣīṣa repented but did not abandon its belligerent mood. Its populace proclaimed once more for Sayf al-Dawla, and asked its governor (who had remained loyal to him throughout) for arms to carry on with the war that was still raging along the border. The governor, however, confessed that he did not have the means; and the citizens, infuriated, sent a delegation to Tarsus, whither Ibn al-Zayyāt had returned, to renew their allegiance

⁴⁷ Our most detailed source on this episode is the *K. al-'Uyūn* (above, n. 4), vol. 4, pt. 2, pp. 501–8. See also Yaḥyā (above, n. 26), 18, pp. 783–84; Miskawayh (above, n. 4) 2, pp. 190–91; Athīr (above, n. 13), 8, pp. 538–39; Gregory Abū al-Faraj Bar Hebraeus, *The Chronography*, ed and tr. E. A. W. Budge, 2 vols. (London, 1932), 1, pp. 167–68.

to him.⁴⁸ There can be little doubt that the occurrence of *Qur'ān* 9:34 owes itself to the failure of Sayf al-Dawla's governor of al-Maṣṣīṣa to assume the cost of defense. The mint name *Thaghr al-Shāmiyya* was obviously adopted to emphasize that following the fall of Anazarba, al-Maṣṣīṣa had become the most forward bulwark on Syria's approaches from the direction of the Cilician border.

The delegation of al-Maṣṣīṣa arrived in Tarsus to find that Ibn al-Zayyāt had in the meantime committed suicide, having first turned the city over to the pro-Ḥamdānīd party. What happened next is unknown, for our source, the *Kitāb al-'Uyūn*, ends abruptly at this point. It is hardly likely that disaffection with Ḥamdānīd rule abated. In al-Maṣṣīṣa, Sayf al-Dawla's representative does not seem to have regained much authority, as we may infer from the survival of the Qur'ānic injunction on subsequent coins. But the pro-Ḥamdānīd party in Tarsus seems to have remained firmly in charge, and was able to prevent the feelings of discontent from taking official form.

The appearance of *Qur'ān* 9:34 on coins from Aleppo and Emessa was undoubtedly inspired by its presence on the coins of al-Maṣṣīṣa; but here it conveys a different message. On purely epigraphic grounds, it is not clear whether the Aleppo coin bears the date 351 or 353. It was at first inclined to connect this coin with the looting of Sayf al-Dawla's palace in 351/962. In Dhū al-Qa'da/December of that year, a Byzantine army sacked Aleppo and took off with, among other things, Sayf al-Dawla's treasure and store of arms. From that moment Sayf al-Dawla was in financial difficulties, and it seemed likely that he could have adopted the anti-hoarding legend because he was raising funds to replenish his treasury. But Sayf al-Dawla hardly had the time to institute this change in 351. He had left the city just before the Byzantines forced an entry and did not return until practically the end of the year.⁴⁹ In addition, the other mints under his control did not pick up this legend as they would have logically done had he adopted it to serve his fund raising purposes. Everything considered, it seems probable that the Aleppo coin 91 was struck in 353 along with the Emessa

⁴⁸ *K. al-'Uyūn* (above, n. 4), vol. 4, pt. 2, p. 507.

⁴⁹ Yaḥyā (above, n. 26), 18, p. 785; Zāfir (above, n. 24), fol. 10b; 'Adīm (above, n. 26), 1, p. 145.

coins, and expresses, as they do, the doubts and apprehension aroused by Sayf al-Dawla's absence from Syria between 353 and 355/964 and 966.

Sayf al-Dawla's departure for Mayyāfāriqīn in Shawwāl 353/October 964, left his officials and allies in Syria with uneasy feelings, exacerbated by the knowledge that the emir was seriously stricken by paralysis and might not recover. There was a widespread unwillingness to submit to Sayf al-Dawla's *ghulām*, Qarghawayh the chamberlain, who had been left in charge of government in Aleppo. The first to revolt was Marwān al-'Uqayli, governor of the litoral province and one of the few Arab tribal leaders still holding a ranking position in northern Syria. Marwān took Emessa, then occupied Aleppo after defeating Qarghawayh in battle. He remained in control of Aleppo until his death from battle wounds shortly afterward.⁵⁰ As for this sedition's date, the literary evidence narrows it down to within a year of Sayf al-Dawla's departure from Aleppo. However, if the coins under study were struck by Marwān as I believe, we can then date this affair to the last two months of 353/964.

During this affair, Marwān was quick to assure Sayf al-Dawla of his loyalty, and the latter reciprocated by confirming him in authority over northern Syria. The numismatic evidence, however, indicates that Marwān took Sayf al-Dawla publicly to task for staying in Mayyāfāriqīn while the Greeks overran northern Syria.

Sayf al-Dawla had withdrawn to his eastern possessions for two reasons: to stay away from the main theater of war pending the conclusion of peace with Byzantium, and to restore his authority in Diyār Bakr, recently grown shaky.

The negotiations with Byzantium had started earlier in the year but were not making easy progress. Sayf al-Dawla pressed for a general peace while Byzantium was interested only in an exchange of prisoners. Arab prisoners far outnumbered Byzantine ones, and the balance had to be freed by outright purchase. Sayf al-Dawla shrank from an agreement limited to prisoners because, in addition to being prohibitively costly, it would have scarcely improved his desperate political and military position. Sayf al-Dawla's tribal allies in northern Syria, grow-

⁵⁰ Athīr (above, n. 13), 8, p. 566; 'Adīm, 1, p. 148.

ing impatient for the prince to return, do not seem to have grasped the full difficulty of his position. The appearance of the anti-hoarding legend on Marwān's coins reveals that they suspected him of being unwilling to spend his personal fortune on the sacrosanct duty of buying the freedom of Moslem prisoners of war.

Two years later *Qurān* 9:34 was worked (in Rajab 355-June 966) into an official Ḥamdānid document which proclaimed the recent exchange of prisoners effected by Sayf al-Dawla with Byzantium.⁵¹ Drafted by the poet Abū al-Faraj al-Babbaghā', the document in question dwells on the large sum of money which the prince expended on this religious duty. Sayf al-Dawla's munificence was a favorite theme for poets, but his generosity was usually panegyricized as a sign of power and greatness rather than in the religious sense expressed in this document. On Marwān al-'Uqaylī's coins *Qurān* 9:34 reflected the prevailing doubts over Sayf al-Dawla's negotiations with Byzantium, while on Sayf al-Dawla's official proclamation it was used as a retort to these doubts.

THE IKHSHĪDIDS AND THE FĀṬIMIDS

On the coins of the Ikhshīdids, a Sunnī dynasty, the 'Alid legend "... *wa 'alā ālihi*" concedes to Fāṭimah's descendants an exclusive political right which Sunnīs did not recognize despite the special status they accorded the House of the Prophet. The same legend on Sayf al-Dawla's coins does not constitute a similar departure from political principle because the Ḥamdānids, as Twelver Shī'ites, conceded these rights as a matter of faith, though they were prevented from putting them in practice by the concealment of the Twelfth Imām.

Egypt's special relation with the Fāṭimids, which is epitomized by the 'Alid legend, is rarely mentioned directly by the sources. In his biographical notice of Kāfūr, for instance, al-Dhahabī simply says that Kāfūr recognized the 'Abbāsids and professed sympathy for the Fāṭimids,

⁵¹ This proclamation is preserved in al-Muḥassin b. 'Alī al-Tunūkhī, *Nishwār al-Muḥādara wa Akhbār al-Mudhākara*, ed. A. Shalchy, 8 vols. (Bhamdoun, 1971-73), 2, pp. 296-300.

"and used to cajole and deceive these and those."⁵² Modern research into the actions of Ikhshīdīd officials reveals that the relationship ran deeper than that. It was governed by an understanding which guaranteed Egypt's independence for the duration of Kāfūr's life, and allowed the Fāṭimids to have a free run for their propaganda in preparation for a peaceful takeover.⁵³ This arrangement complemented the truce of 325/937 with Byzantium and minimized Egypt's defense requirements.

The idea of coming to terms with the Fāṭimids in order to reduce Egypt's army budget had been contemplated by al-Ikhshīd but put off because he hoped to play host to the 'Abbāsīd caliph. Between 330 and 333/941 and 944, al-Ikhshīd came twice to the conclusion that al-Muttaqī might be induced to transfer the capital to Damascus. On the second of these occasions, he was actually invited by the caliph for a conference at Rakka. The 'Abbāsīd issue for Egypt in 333⁵⁴ was obviously struck to demonstrate al-Ikhshīd's loyalty to the caliph, and must have comprised the monetary gift which al-Ikhshīd presented to al-Muttaqī at Rakka. During the meeting, however, it transpired that the caliph wanted al-Ikhshīd to return with him to Iraq and restore order. Al-Ikhshīd turned down the invitation and al-Muttaqī returned to Baghdad by himself, where he was deposed in favor of al-Mustakfī. And there ended all prospect of removing the caliphate from Iraq.

Meanwhile, the Fāṭimids had been crippled by the revolution of Ibn Kaydād, so al-Ikhshīd did not have a pressing reason to revive his old plan. It was only during the reign of al-Ikhshīd's son Anūjūr that the Fāṭimids restored order to northern Africa and again posed a threat to Egypt. By then, the man in control of Egypt was the eunuch Kāfūr who, unlike al-Ikhshīd, did not have dynastic interests to protect. Kāfūr could afford to take his arrangements with the Fāṭimids much further than al-Ikhshīd had planned.

⁵² Dhahabī (above, n. 27), fol. 277a.

⁵³ S. I. Kāshif, *Miṣr fī 'Aṣr al-Ikhshīdiyyīn*, 2nd ed. (Cairo: Dār al-Nahḍa al-'Arabiyya, 1970), pp. 380–84. Cf. F. Dachraoui, "La Crète dans le conflit entre Byzance et al-Mu'izz," *Les cahiers de Tunisie* 7 (1959), p. 316.

⁵⁴ *BMCOR* 1, 473.

The Fāṭimid caliph al-Manṣūr put an end to the last remnants of Ibn Kaydād's revolution by Ramaḍān 336/March 948. But it had been apparent since the end of the previous year that the Fāṭimid caliphate would survive. Kāfūr appears to have made his arrangements early in 336/mid 947, for I have found no coins from Egypt of the old type for that year. The lone Ikhshīdīd coin from Emessa for 336 (142), which must have been struck fairly early in the year, likewise bears the 'Alid legend.

Byzantium's strident policy in the eastern Mediterranean, which in the late 340s/early 960s threatened to cut Egypt off from major sources of timber for its two maritime fleets, underlined the incompatibility of Egypt's and north Africa's respective interests and appears to have generated some friction between the two governments. In 349/960, Kāfūr attempted to interest the Fāṭimid caliph al-Mu'izz in a joint venture to defend Crete against Byzantium.⁵⁵ Al-Mu'izz dodged the issue, but apparently at so much loss of countenance that al-Nu'mān b. Muḥammad, chief propagandist and highest ranking qādī of the Fāṭimid empire, was later at pains to belittle Egypt's attempt to aid the beleaguered island.⁵⁶ In the years which followed, Egypt made feeble attempts to aid Cyprus (in 352/963) and Tarsus (in 354/965) against Byzantium,⁵⁷ while the Fāṭimids made none.

The most likely places for Kāfūr's Fāṭimid policy to run into opposition were Damascus and Palestine, the Ikhshīdīd family's original sinecures, where effective power remained in the hands of members of the family. The 'Alid legend on the Ikhshīdīd coins of Syria for 336/947 (142, 166-67, 183) must have been struck on the direct orders of Kāfūr, who was in Syria fighting the Ḥamdānids during the first part of the year. One may also conjecture that Kāfūr's sojourn in Syria was spent mainly in Damascus as one coin from that city (167) bears his

⁵⁵ Al-Nu'mān b. Muḥammad, *al-Majūlis wa al-Musūyarūl wa al-Mawāqif wa al-Tawqī'ūt* (American University of Beirut MS. photocopy, MS. 297.8:N17mA), pp. 323-29; F. Dachraoui (above, n. 53), pp. 307-8.

⁵⁶ Al-Nu'mān, p. 324.

⁵⁷ Yahyā (above, n. 26), 18, pp. 794-97; Muḥammad b. Aḥmad al-Dhahabī, *Kitāb Ta'rikh al-Islām al-Kabīr*, excerpts in M. Canard, ed., *Sayf al-Dawla: Recueil des textes relatifs à l'émir Sayf al-Dawla le Hamdanide avec annotations* (Algiers: Edition Jules Carbonel, 1934), pp. 185-86; 'Adīm (above, n. 26), 1, pp. 142-43.

initial *kāf* —the earliest such specimen to my knowledge. Tiberias, the one Ikhshīdīd Syrian mint which does not seem to have adopted the 'Alid legend in 336,⁵⁸ remained outside the scope of Ikhshīdīd military activities.

In Ramla (mint name, Filasṭīn) where the governor was al-Ikhshīd's nephew al-Ḥasan b. 'Ubayd Allāh, the 'Alid legend disappeared from the coinage in 337/948, the year after Kāfūr returned to Egypt (185–94). It was, however, retained on the sole Damascus specimen of the next year (168). The governor of Damascus in that year was al-Ikhshīd's surviving brother al-Ḥasan b. Ṭughj,⁵⁹ so it does not appear that al-Ikhshīd's family were of one mind on Kāfūr's Fāṭimid policy. After 338/949, there are no extant Ikhshīdīd coins for Damascus, so we cannot ascertain al-Ḥasan b. Ṭughj's opinion of the policy of his nephew and namesake al-Ḥasan b. 'Ubayd Allāh. Anyway, Ibn Ṭughj died three years later, in 341/952.⁶⁰

The little we know of al-Ḥasan b. 'Ubayd Allāh's activities after the Fāṭimid occupation of Egypt suggests that he headed the anti-Fāṭimid party and attempted to organize military resistance in Syria.⁶¹ There is, however, a curious account of al-Ḥasan's last years which does not tally with this. He allegedly embraced the Fāṭimid call and, being at odds with Kāfūr and the military establishment of Egypt, was then induced by a Fāṭimid agent to seek Fāṭimid backing against the Ikhshīdīd government. The Fāṭimid occupation of Egypt is then said to have occurred in the immediate wake of al-Ḥasan's appeal for Fāṭimid help.⁶²

⁵⁸ P. Balog, "Tables des références des monnaies ikhchidites," *RBN* 102 (1956), p. 130 (2 specimens). To these must be added two uncatalogued specimens in the collections of the American Numismatic Society and the Bibliothèque Nationale. All these coins were struck in Tiberias in 336, without the 'Alid legend.

⁵⁹ Taghribirdī (above, n. 5), 3, p. 297.

⁶⁰ Taghribirdī, 3, p. 310.

⁶¹ Aḥmad b. 'Alī al-Maqrīzī, *Ilṭi'āz al-Ḥunafā' bi-Akhbār al-A'imma al-Fāṭimiyyīn al-Khulafā'*, ed. J. D. Snayyāl, 3 vols. (Cairo: A-Majlis al-A'lā lil-Shu'ūn al-Islāmiyya, 1967–73), 1, pp. 120, 122; Taghribirdī, 4, p. 26; Athīr (above, n. 13), 8, p. 591.

⁶² Taghribirdī, 4, pp. 72–74, citing a contemporary account by the Qadi 'Abd al-Jabbār al-Baṣrī, who seems to have been hostile to the Fāṭimids.

One is inclined to treat this account as apocryphal because, aside from overlooking Kāfūr's dealings with the Fāṭimids, it fails to account for al-Ḥasan's belated anti-Fāṭimid stand and contains what appears to be a fanciful account of the last months of al-Ḥasan's life, spent in captivity at al-Manṣūriyya. The numismatic evidence indicates, however, that the reported estrangement between al-Ḥasan and Kāfūr and al-Ḥasan's subsequent contact with the Fāṭimids contain a substratum of truth, though both incidents must have occurred at an earlier date and in the opposite causal relationship.

While reluctant to condone Kāfūr's Fāṭimid policy, al-Ḥasan b. 'Ubayd Allāh does not seem to have initially challenged Kāfūr himself. He introduced Kāfūr's *kāf* on the coinage of Filastīn in 337/948 (185-93), the very year he dropped the 'Alid legend, and at least a decade before Kāfūr ventured to publish his initial on Egypt's coins.⁶³ Once he began to recognize the futility of resisting Fāṭimid influence, however, al-Ḥasan must have realized that his family's chance of political survival might be forfeited should Kāfūr remain the conduit between the Ikhshīdīd government and the Fāṭimids. Al-Ḥasan therefore did not merely acquiesce in Kāfūr's Fāṭimid policy, but tried to cut him out and cast himself as the foremost ally of the Fāṭimids. In 341/952 Kāfūr's initial was removed from Filastīn's coins, and did not reappear until five years later (196-208). The prolonged absence of the *kāf* from Filastīn's coins roughly coincides with the reappearance of the 'Alid legend. It is moreover to be noted that Anūjūr b. al-Ikhshīd's attempt in 343/954 to free himself from Kāfūr's tutelage (in the course of which he bethought of seeking refuge with his cousin in Ramla)⁶⁴ occurred midway during the interval when the *kāf* did not appear on any of the extant coins from Filastīn.

⁶³ There is a gap in the numismatic evidence for Egypt for the four years preceding the appearance of the *kāf*. One may reasonably conjecture, however, that Kāfūr introduced his initial on the Egyptian coins immediately after the death of Anūjūr and accession of 'Alī b. al-Ikhshīd toward the end of 349/960, at which point Kāfūr tightened his control over the Egyptian government. The first extant Egyptian coins to carry Kāfūr's initial were issued in 350/961. Balog (above, n. 58), p. 125 (2 specimens).

⁶⁴ Taghribirdī (above, n. 5), 3, pp. 292-93.

Unable to outbid Kāfūr, al-Ḥasan was left with the one real option of preparing to resist the Fāṭimids. But since he restored the *kāf* to Filastīn's coinage in 346/957, and thereafter retained it along with the 'Alid legend during a whole decade (209–48), he appears to have chosen to get on Kāfūr's bandwagon instead. The futility of this policy must have become apparent by 355/966, which was the first year of Kāfūr's personal reign as well as the year in which the Fāṭimids started to prepare in earnest for the occupation of Egypt.⁶⁵ All but one specimen from Filastīn for this year bear the 'Alid legend and the *kāf* as before (244–48, but without the name of an Ikhshīdīd prince since none was associated in power). The one exception of the same year carried the 'Alid legend without the *kāf* (249, listed here as 'Abbāsīd). What the coins for 355 imply is that al-Ḥasan initially acquiesced in Kāfūr's accession, but changed heart some time during the year, and attempted once again to guarantee his personal future by a separate agreement with the Fāṭimids.

In 357/968, Kāfūr died. The establishment in Egypt raised the son of the last Ikhshīdīd prince to nominal rule and formally associated him in power with al-Ḥasan b. 'Ubayd Allāh. Real power in Egypt was exercised for a while by the minister Abū al-Faḍl Ja'far b. al-Furāt, a determined anti-Fāṭimid who immediately took steps to curb the Fāṭimid party. Al-Ḥasan b. 'Ubayd Allāh arrived in al-Fuṣṭāṭ around the turn of 357–58/968 and removed the anti-Fāṭimid minister from power, treating him horribly.⁶⁶ This behavior, left unexplained by the sources, is best understood in light of al-Ḥasan's confidence that he could come to terms with the Fāṭimids. The specimen from Filastīn for 357 and two of the five specimens for 358 (250–51) are Ikhshīdīd issues bearing the 'Alid legend. They indicate that in 357/968, al-Ḥasan pursued his contacts with the Fāṭimids and overthrew Ibn al-Furāt in an attempt to suppress the anti-Fāṭimid party in Egypt and thereby appease the Fāṭimids. But after returning to Ramla in Rabī' II 358/February 969, al-Ḥasan appears to have recognized the failure of his policy of appeasement, for the 'Alid legend was again dropped from the coinage of Filastīn (252–54). His decision to take up arms

⁶⁵ Maqrīzī, *Ilti'āz* (above, n. 61), 1, p. 96.

⁶⁶ Taghribirdī, 4, pp. 21–23.

against the Fāṭimids must have been made only after he had given up trying to reach a favorable agreement with them.

While the Egyptian establishment did not wholeheartedly support Kāfūr's passive foreign policy, it is also obvious that those who wished to undo Kāfūr's arrangement with the Fāṭimids would have had to challenge Kāfūr's authority, throw Egypt's politics in disarray, and perhaps hasten the Fāṭimid takeover. Fāṭimid propaganda did not go entirely unopposed,⁶⁷ but the sources do not record that the opposition faced the root of the problem by attempting to constrain Kāfūr to rebuild Egypt's armed forces and suppress Fāṭimid agents. The crux of the matter for most members of the Ikhshīdīd establishment was personal survival rather than Egypt's political future. Hence Kāfūr adhered to his policy until the end of his life; the Egyptian armed forces went to seed and were neither able to maintain Egypt's status in the eastern Mediterranean nor act as a lever against the Fāṭimids.

CATALOGUE

The catalogue which follows consists of three sections: a list of abbreviations, translations of religious formulae found on the coins, and the actual catalogue. The headings in the catalogue reflect issues raised in the article rather than constituting a complete description of the coin types.

ABBREVIATIONS

ANS	The American Numismatic Society, New York.
Ash	The Ashmolean Museum, Oxford.
AUB	The American University of Beirut.
Bach	J. L. Bacharach, "Al-Ikhshīd, the Ḥamdānids and the Caliphate: The Numismatic Evidence," <i>JOAS</i> 94 (1974), pp. 360-70.

⁶⁷ Taghribirdī, 3, p. 326.

- Balog** P. Balog, "Tables des références des monnaies ikhchidites," *RBN* 102 (1956), pp. 107-34.
- BM** The British Museum, London.
- BMC** *BMCOR*.
- Cons** Müzê humâyûn, *Mäskûkât qadîme islâmiye qatâlóghl*, by Edhem Isma'il Ghalib et al. (Constantinople: Matba'at seh, 1312-34 A.H.).
- Dama** The National Museum, Damascus.
- "Déc"** C. J. Tornberg, "Découvertes récentes de monnaies koufique en Suède," *Revue de la numismatique belge*, 5th ser., 2 (1870), pp. 221-45.
- "FasA"** S. Lane-Poole, "Fasti Arabici, 6. Arabian and Other Rare Coins from the Collections of Colonel Gosset, Major Trotter, and J. Avent, Esq.," *NC*, 3rd ser., 7 (1887), pp. 324-39.
- Herm** The State Hermitage Collection, Leningrad.
- Lavoix** H. Lavoix, *Catalogue des monnaies musulmanes de la Bibliothèque Nationale*, 3 vols. (Paris: Impr. Nationale, 1887-96).
- L-W** U. S. Linder-Welin, "Sayf al-Dawlah's Reign in Syria and Diyarbekr in the Light of the Numismatic Evidence," *Commentationes de nummis saeculorum, IX-XI*, in *Suecia repertis* (1961), 1, pp. 17-104.
- Naq** N. Naqshabandî, "Al-Dînâr al-Islâmî li-Mulûk al-Ṭawâ'if," *Sumer* 3, 2 (1947), pp. 270-311.
- NumC** C. J. Tornberg, *Numi Cufici Regii numophylacii Holmiensis quos omnes in terra Sueciae repertos digessit et interpretatus est* (Upsala: Excudebant Leffler et Sebell, 1848).
- Paris** Bibliothèque Nationale, Paris.
- RIC** G. C. Miles, *Rare Islamic Coins*, ANSNNM 118 (1950).
- Stoc** The Central Office and Museum of National Antiquities and the Royal Coin Cabinet, Stockholm.
- "Sym"** C. J. Tornberg, "Symbolae ad rem numariam Muhammedanorum ex Museo regio Holmiensi," 4 pts., *Nova acta Regiae Societatis Scientiarum Upsaliensis* 13 (1846); 3rd ser., 1 (1855); 2 (1858); 4 (1863).
- YKB** Yapi ve Kredi Bankasi, Istanbul.

RELIGIOUS FORMULAE

'Alid legend

صلى الله عليه وعلى آله.

May God bless him (the Prophet) *and his family*.

Kalimah

The profession of faith at the beginning of the area inscriptions.

Qur'ān 9:33

محمد رسول الله ارسله بالهدى ودين الحق ليظهر الدين كله ولو
كره المشركون.

Muḥammed is the Apostle of God, He has sent him with guidance and the true religion that it may prevail over all other religions, even if the disbelievers are averse.

Qur'ān 9:33 mixed with 28:68 or 23:93

هو الذي ارسل رسوله بالهدى ودين الحق ليظهره سبحانه الله
وتعالى عما يصفون.

He it is who has sent his Apostle with the guidance and the true religion that it may prevail; exalted be God, He is high over what they affirm of Him.

Qur'ān 9:34

والذين يكتزون الذهب و الفضة ولا ينفقونها في سبيل الله فبشرهم
بعذاب اليم.

Those who store up gold and silver and expend it not in God's way, unto them bring the glad tidings of a painful punishment.

Qur'ān 30:3-4

لله الامر من قبل ومن بعد ويومئذ يفرح المؤمنون بنصر الله.

To God belongs the order before and after and in that day the believers shall rejoice in help from God.

Qur'ān 30:3 mixed with 30:11 or 13

لله الامر من قبل ومن بعد ويومئذ الساعة يفرح المؤمنون بنصر
الله.

To God belongs the power before and after and on that day, when the
(last) hour comes, the believers shall rejoice in help from God.

Qur'ān 30:3 mixed with 30:11, 13, and 54

لله الامر من قبل ومن بعد ويومئذ ويوم يقوم الساعة نصر الله.
To God belongs the power before and after, and on that day, and (it
is) that day when the (last) hour comes, help from God.

CATALOGUE

No.	Year	Metal	g	mm	Reference
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Al-Mawṣil (Mosul)

Ḥamdānīd al-Muttaqī

Obv. below field, Nāṣir al-Dawla cited as Nāṣir al-Dawla al-Ḥasan b.
ʿAbd Allāh

Sayf al-Dawla not cited

1	330	AR	3.77	28	Paris
2	330	AR	3.92	26.5	Paris
3	330	AR	1.69	25.5	Herm 2989:6745
4	330	AR	2.43	25.5	Herm 3184:4662
5	330	AR	3.48	27	Herm 3184:4664

Ḥamdānīd al-Muttaqī

6	330	AR	1.84	26	BMC 3, 3
7	330	AR	3.23	26	Paris
8	330	AR	2.41	24.5	Herm 2989:6760
9	330	AR	—	—	Cons 2, 828
10	332	AR	2.64	26	Paris
11	332	AR	3.04	28.5	Stoc 3547:220

<i>No.</i>	<i>Year</i>	<i>Metal</i>	<i>g</i>	<i>mm</i>	<i>Reference</i>
12	332	Æ	4.95	26	YKB
13	332	Æ	4.75	28	Herm 2989:6762
14	332	Æ	3.48	25	Herm 2989:6763
15	332	Æ	3.62	—	ANS 1975.73.25
16	333	Æ	3.46	25	Paris

Ḥamdānīd al-Mustakfī, Imām al-Ḥaqq

17	334	Æ	5.60	27	BMC 3, 7
18	334	Æ	3.52	26	Paris
19	334	Æ	3.92	28	Paris
20	334	Æ	4.40	26	AUB C.8893
21	334	Æ	4.42	26	AUB C.8894
22	334	Æ	2.86	26	Herm 2989:6764
23	334	Æ	—	—	"Sym" 4, 135
24	334	Æ	3.37	—	ANS 1972.2.41

Ḥamdānīd al-Muṭī'

Mint, . . . d . . . al . . . wṣīl, "Madīnat al-Mawṣīl?"

25	334	Æ	3.25	28	Paris
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Ḥamdānīd al-Mustakfī

26	335	Æ	3.05	28	YKB, 7
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Ḥamdānīd al-Muṭī'

27	335	Æ	3.64	25	AUB C.8896
28	335	Æ	3.96	27	Stoc 6331
29	338	Æ	4.77	28.5	Herm 3184:3135
30	338	Æ	3.95	27	Herm 2989:6765
31	339	Æ	4.65	26	YKB, 8
32	339	Æ	3.32	27	Herm 2989:6766
33	339	Æ	3.41	27	Herm 2989:6767
34	340	Æ	3.00	28	YKB
35	341	Æ	2.44	20	ANS 1917.215.784
36	343	Æ	2.98	29	YKB, 10
37	345	Æ	2.30	28	YKB, 11
38	346	Æ	3.20	29	Stoc 12956:559

<i>No.</i>	<i>Year</i>	<i>Metal</i>	<i>g</i>	<i>mm</i>	<i>Reference</i>
39	347	Ⓐ	4.30	28	YKB, 12
40	348	Ⓐ	3.11	29	Paris
41	348	Ⓐ	2.93	27	Paris
42	348	Ⓐ	4.04	27	Paris
43	349	Ⓐ	3.60	26	ANS
44	349	Ⓐ	2.87	26.5	Paris
45	349	Ⓐ	3.07	26.5	Paris
46	349	Ⓐ	3.20	25	YKB
47	350	Ⓐ	3.18	25	Herm 2989:6768
48 ^a	351	Ⓐ	3.72	28	BMC 3, 13
49	351	Ⓐ	2.71	–	ANS 1917.215.785
50	354	Ⓐ	3.13	26.5	NumC Cl. XV:7
51	354	Ⓐ	–	–	NumC p. 260
52	356	Ⓐ	2.53	28	Stoc

*Nişibin***Ḥamdānīd al-Mustakfī, Imām al-Ḥaqq**

53	334	Ⓐ	4.34	25	Herm 3219:16047
54	334	Ⓐ	3.66	26	Herm 2989:6774

Ḥamdānīd al-Muṭī'

55	334	Ⓐ	–	–	Cons 3, 832
56	335	Ⓐ	2.69	26	Stoc 6331
57	336	Ⓐ	3.56	23	Paris
58	336	Ⓐ	2.46	24	BMC 3, 8
59	336	Ⓐ	4.80	26.5	Stoc 6331
60	337	Ⓐ	3.72	24	Herm 2989:6776
61	338	Ⓐ	–	–	Cons 2, 834

^a Cf. Linder-Welin, n. 34.d, where she republishes this coin under the mint and date al-Maṣṣiṣa 351, describing it in the same terms as the coins struck in al-Massi-sa between 351 and 353. My own reading of this coin confirms Lane-Poole's with the only exception that the mint is possibly "Madīnat al-Mawṣil," with "Madīna" slightly contracted.

<i>No.</i>	<i>Year</i>	<i>Metal</i>	<i>g</i>	<i>mm</i>	<i>Reference</i>
62	339	ⲁ	3.23	25	Stoc
63	340	ⲁ	2.98	24	<i>BMC</i> 3, 9
64	340	ⲁ	3.17	25	Paris
65	340	ⲁ	3.33	25	AUB C.8901
66	344	ⲁ	3.02	23	Paris
67	344	ⲁ	4.45	25	AUB C.8903

Ḥamdānīd*Rev. field illegible except for "Muḥammad"*

68	346	ⲁ	3.19	26	Stoc
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Ḥamdānīd al-Muṭī'

69	347	ⲁ	3.64	26	Herm 2989:6775
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Ḥamdānīd*Rev. field as 68*

70	349	ⲁ	2.15	21	<i>NumC</i> Cl.XV:6
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Ḥamdānīd al-Muṭī'

71	350	ⲁ	5.02	27	Herm 2989:6778
72	352	ⲁ	3.08	27	YKB 837.b
73	352	ⲁ	2.80	26	AUB, C.8904
74	352	ⲁ	2.94	26	Herm 3184:3695
75	354	ⲁ	3.09	24	<i>NumC</i> Cl.XV:5
76	354	ⲁ	2.96	25.5	Paris
77	355	ⲁ	—	—	"Déc" 84
78	355	ⲁ	3.33	26	<i>BMC</i> 3, 14
79	355	ⲁ	2.54	25.5	Paris

Ḥalab (Aleppo)**Ḥamdānīd al-Mustakfī**

80	333	ⲁ	3.80	—	ANS 1971.316.936
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Ḥamdānīd

81	334	ⲁ	3.46	—	Dama A. 1953
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No.	Year	Metal	g	mm	Reference
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Ḥamdānīd al-Mustakfi

‘Alid legend

82	334	AR	3.50	25	Paris
83	334	AR	3.56	26.5	L-W 10
84	334	AR	—	—	L-W 9

Ḥamdānīd al-Muṭīʿ

‘Alid legend

85	335	AR	3.45	23.5	L-W 15.a
86	335	AR	4.32	25	L-W. 15.b
87	336	AR	2.48	25	L-W 15.1
88	341	AR	3.80	26	AUB, C.8902

Ḥamdānīd al-Muṭīʿ

Sayf al-Dawla not cited

89	347?	AR	0.52	14.5	L-W 26
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Ḥamdānīd al-Muṭīʿ

Obv. and *rev.* outer margin, Sayf al-Dawla Abū al-Ḥasan
Mint, Al-Khazna al-Shāmiyya li-Halab

90	349	AR	3.70	27	YKB 1.2
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Ḥamdānīd al-Muṭīʿ*Obv.* outer margin, al-amīr ... al-Dawla*Rev.* inner margin, *Qurʾān* 9:34; outer margin, al-amīr Nāṣir al-Dawla

‘Alid legend

Mint, al-Khazna al-Shāmiyya li-Halab

91	353?	AR	2.44	25.5	L-W 35
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Mayyāfāriqīn**Ḥamdānīd al-Muṭīʿ***Obv.* outer margin, Nāṣir al-Dawla*Rev.* outer margin, Sayf al-Dawla

‘Alid legend

92	340	AR	3.00	24	BM
93	340	AR	—	23.5	L-W 21

<i>No.</i>	<i>Year</i>	<i>Metal</i>	<i>g</i>	<i>mm</i>	<i>Reference</i>
Ḥamdānīd al-Muṭīʿ					
94	346	Æ	4.80	26.5	L-W 25
95	348	Æ	3.73	25	Paris
96	348	Æ	—	26.5	L-W 28
Ḥamdānīd al-Muṭīʿ					
Mint, al-Thughūr Mayyafariqīn					
97	349	Æ	3.64	23.5	L-W 29.a
98	349	Æ	3.50	24.5	L-W 29.b
Ḥamdānīd al-Muṭīʿ					
99	350	Æ	3.25	23.5	L-W 30.a
100	350	Æ	—	—	L-W 30.b
Ḥamdānīd al-Muṭīʿ					
ʿAlid legend					
101	354	Æ	2.52	24.8	L-W 39
102	354	Æ	—	—	“Sym” 3:1, 40, 41
Ḥamdānīd al-Muṭīʿ					
Mint, Madīnat Mayyafariqīn					
103	356	Æ	—	—	L-W 40.a
104	356	Æ	2.85	24	L-W 40.b
<i>Anṭākiyya (Antioch)</i>					
ʿAbbāsīd, Tūzūn al-Muttaqī (caliph's name partly obliterated)					
105	333	Æ	4.87	25.5	Paris
ʿAbbāsīd, Tūzūn al-Mustakfī, al-Khalīfa					
106	333	Æ	3.00	24	AUB, C.8857
107	333	Æ	3.57	25	L-W 8
ʿAbbāsīd al-Muṭīʿ					
108	337	Æ	4.42	27	RIC, 118

No. Year Metal g mm Reference

Ḥamdānīd al-Muṭī'

Alid legend

109	337	ⲁ	2.20	23	L-W 20
110	337	ⲁ	3.35	25	YKB, 1
111	337	ⲁ	3.22	25	AUB, C.8898

Ḥamdānīd al-Muṭī'

112	340	ⲁ	2.94	26	ANS 1917.215.787
113	340	ⲁ	3.01	26	ANS 1917.215.788
114	340	ⲁ	3.60	24	L-W 22.a
115	340	ⲁ	5.19	26.5	L-W 22.b
116	340	ⲁ	3.77	27	L-W 22.c
117	340	ⲁ	3.02	27	L-W 22.d
118	340	ⲁ	2.94	27	L-W 22.e
119	340	ⲁ	2.95	26.5	L-W 22.f

Ḥamdānīd al-Muṭī'

Nāṣir al-Dawla not cited

120	342	ⲁ	2.72	26	L-W 23.a
121	342	ⲁ	—	—	L-W 23.b
122	342	ⲁ	2.41	25	L-W 23.c

Ḥamdānīd al-Muṭī'

Obv. and rev. outer margin, Sayf al-Dawla

Mint, possibly Madīnat Anṭākiyya

123	349	ⲁ	4.05	29	ANS, 62.107.1
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Madīnat al-ʿAwāṣim (Antioch?)^b

Ḥamdānīd al-Muṭī'

124	348	ⲁ	2.85	24	L-W 27
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^b I adopt the reading of the mint name suggested with some reluctance by Mrs. Linder-Welin, who also suggests that this coin was struck in Antioch.

No.	Year	Metal	g	mm	Reference
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*Tarsus***ʿAbbāsīd al-Mustakfi**

125	333	Æ	—	—	L-W 7
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Ḥamdānīd al-Muṭīʿ

Nāṣir al-Dawla not cited

126	354	Æ	3.29	25	L-W 38
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*Al-Maṣṣīṣa***ʿAbbāsīd, Tuzūn al-Mustakfī, al-Khalīfa**

127	333	Æ	2.54	26	BMC 2, 617
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Ḥamdānīd al-Maṭīʿ

Rev. inner margin, *Qurʾān* 30:3 with 30:11 or 13; outer margin, *Qurʾān* 9:34

128	351	Æ	3.13	27.5	L-W 32.a
129	351	Æ	2.59	25	L-W 32.b
130	351	Æ	3.23	25	L-W 32.c

Ḥamdānīd al-Muṭīʿ

Obv. inner margin, *Qurʾān* 30:3 with 30:11, 13, and 54

Rev. inner margin, *Qurʾān* 30:3 with 30:11 or 13; outer margin, *Qurʾān* 9:34^c

131	352	Æ	4.60	27	L-W 33.a
132	352	Æ	—	26	L-W 33.b
133	352	Æ	2.59	25	L-W 33.c

^c Mrs. Linder-Welin reads the third line on the rev. field of these coins *ṣallā Allāhu ʿalayhi wa ʿālihi* (with the proposition *ʿalā* omitted). I have examined the first two of these coins and am of the opinion that the last word is a contraction of *sallam*.

No.	Year	Metal	g	mm	Reference
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Ḥamdānīd al-Muṭīʿ*Rev.* outer margin, *Qurʾān* 9:34

ʿAlid legend

134	353	ⲁ	3.74	26	L-W 34.a
135	353	ⲁ	3.30	27	L-W 34.b
136	353	ⲁ	3.53	26	L-W 34.c

Ḥamdānīd al-Muṭīʿ

Nāṣir al-Dawla not cited

137	35x	ⲁ	2.28	23	Herm 2989:6789
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*Thaghr al-Shāmiyya***Ḥamdānīd al-Muṭīʿ***Rev.* inner margin *Qurʾān* 9:33 with 28:68 or 23:93; outer margin, *Qurʾān* 9:34

ʿAlid legend

138	350	ⲁ	2.38	28	L-W 31
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*Ḥimṣ (Emessa)***Ḥamdānīd al-Muttaqī**

139	333	ⲁ	3.11	27	AUB C.8892
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ʿAbbāsīd, Tūzūn al-Mustakfī

140	333	ⲁ	–	–	Bach 44
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Ḥamdānīd al-Mustakfī

141	334	ⲁ	2.12	24	L-W 12
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Ikḥshīdīd al-Muṭīʿ

ʿAlid legend

142	336	ⲁ	3.81	25	L-W 17
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<i>No.</i>	<i>Year</i>	<i>Metal</i>	<i>g</i>	<i>mm</i>	<i>Reference</i>
Ḥamdānīd al-Muṭīʿ					
ʿAlid legend					
143	342	Æ	1.64	24	<i>BMC</i> 3, 16
Ḥamdānīd al-Muṭīʿ					
144	350	Æ	5.72	23.5	BM
Ḥamdānīd al-Muṭīʿ					
<i>Rev.</i> outer margin, <i>Qurʾān</i> 9:34					
ʿAlid legend					
145	353	Æ	3.89	28.5	L-W 37.a
146	353	Æ	2.57	27	L-W 37.b
147	353	Æ	5.72	25.5	L-W 37.c

Ḥarrān (Haran)

Ḥamdānīd al-Mustakfī					
ʿAlid legend					
148	334	Æ	2.94	28	L-W 11
Ḥamdānīd al-Muṭīʿ					
ʿAlid legend					
149	337	Æ	3.57	27	L-W 18.a

Al-Raqqā/al-Rāfiqa (Rakka)

Ḥamdānīd al-Muṭīʿ					
Mint, al-Raqqah					
150	338	Æ	3.10	27	AUB C.8899
Ḥamdānīd al-Imām al-Muṭīʿ lillāh					
ʿAlid legend					
Mint, al-Rāfiqa					
151	356	Æ	2.82	25	<i>NumC</i> Cl.XV:8

No. Year Metal g mm Reference

Dimishq (Damascus)

Ikshīdīd al-Muttaqī

152	333	AR	3.05	25.5	Paris
153	333	AR	3.71	28	Lavoix 3, 49 bis
154	333	AR	4.09	26.5	L-W 5
155	333	AR	—	—	"Sym" 3:1, 42
156	333	AR	—	—	Balog p. 129 (2 spec)

Ikshīdīd al-Mustak

157	334	AR	3.13	26	ANS 1917.215.776
158	334	AR	3.55	25	ANS 1971.316.934
159	334	AR	2.34	25	Paris
160	334	AR	4.01	26	Paris
161	334	AR	2.74	27.5	Paris
162	334	AR	3.77	26	Paris
163	334	AR	—	—	"FasA" p. 333
164	334	AR	3.40	26	AUB C.8822
165	334	AR	2.66	27	AUB C.8833

Ikshīdīd al-Muṭī'

'Alid legend

166	336	AR	4.59	27	Balog p. 130
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Ikshīdīd al-Muṭī'

'Alid legend

Obv. field 𐤀𐤊

167	336	AR	2.87	26	Paris
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Ikshīdīd al-Muṭī'

'Alid legend

168	338	AR	1.42	26	BMC 2, 236
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Filasīn (Ramla)

Ikshīdīd al-Muttaqī

169	333	AR	3.08	22	Lavoix 3, 49
170	333	AR	4.44	22.5	BMC 2, 231

No.	Year	Metal	g	mm	Reference
171	333	A	3.21	22.5	BMC 2, 232
172	333	A	2.92	22	ANS 1972.228.113
173	333	A	–	–	Balog p. 121 (2 spec)

Ikshīdīd al-Mustakfī

174	334	A	3.41	24	Balog p. 129
175	334	A	–	–	Bach 58
176	335	A	–	–	Bach 59

Ikshīdīd al-Muṭīʿ

177	335	A	4.45	23	ANS 1957.82.2
178	335	A	4.58	23	ANS 1972.228.114
179	335	A	3.95	22	BMC 9, 232k
180	335	A	4.58	23	Lavoix 3, 50 bis
181	335	A	–	–	Balog p. 122 (4 spec)
182	335	A	2.46	27	Paris

Ikshīdīd al-Muṭīʿ

ʿAlid legend

183	336	A	3.12	29	ANS
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Ikshīdīd al-MuṭīʿObv. field 𐤁^d

184	337	A	3.73	21	ANS
185	337	A	3.72	22	ANS
186	337	A	3.09	21	ANS
187	337	A	3.37	22.5	BMC 2, 233
188	337	A	3.33	22	Lavoix 3, 51
189	337	A	3.69	21	Lavoix 3, 52
190	337	A	–	–	Balog p. 123 (4 spec)
191	337/339	A	3.66	21	AUB C.8825
192	337/339	A	–	–	Balog p. 124 (3 spec)

^d Lane-Poole and Lavoix read šād for kāf beneath the obv. field on 188–90.

<i>No.</i>	<i>Year</i>	<i>Metal</i>	<i>g</i>	<i>mm</i>	<i>Reference</i>
Ṭḥshīdīd al-Muṭī'					
193	337/339	AR	3.91	23.5	Lavoix 3, 56
Ṭḥshīdīd al-Muṭī'					
<i>Obv. field</i> ḏ					
194	339	A	2.42	—	ANS
Ṭḥshīdīd al-Muṭī'					
<i>Obv. field</i> ḏ					
'Alid legend					
195	340	AR	2.35	24	ANS
Ṭḥshīdīd al-Muṭī'					
'Alid legend					
196	341	A	4.34	22	ANS
197	341	A	3.92	22	ANS
198	341	A	3.80	24	Balog p. 124
199	341	A	—	—	Balog p. 124 (2 spec)
200	341	A	4.73	24	AUB C.8827
201	341	AR	2.46	24	ANS
202	342	A	—	—	Balog p. 124
203	345	A	2.48	23	Balog p. 124
204	345	A	3.80	22	BMC 2, 235
205	345	A	3.69	23	Lavoix 3, 53
206	345	A	3.35	22	Lavoix 3, 54
207	345	A	—	—	Balog p. 124
208	345	AR	—	—	Balog p. 132
Ṭḥshīdīd al-Muṭī'					
<i>Obv. field</i> , ḏ ^e					
'Alid legend					
209	346	A	3.11	23	ANS
210	346	A	3.28	22	ANS

* Lavoix and Balog read ṣād for kāf beneath the obv. field. on 217–18.

<i>No.</i>	<i>Year</i>	<i>Metal</i>	<i>g</i>	<i>mm</i>	<i>Reference</i>
211	346	<i>A</i>	3.54	23.5	Naq pp. 279-80
212	346	<i>A</i>	4.28	22	Ash
213	346	<i>A</i>	—	—	Balog p. 125 (4 spec)
214	346	<i>Æ</i>	2.61	24	Balog p. 132
215	346	<i>Æ</i>	—	—	Balog p. 132 (2 spec)
216	347	<i>A</i>	3.42	21	Lavoix 3, 55; Balog p. 125
217	347	<i>A</i>	—	—	Balog p. 125 (2 spec)
218	350	<i>A</i>	4.31	22	ANS
219	350	<i>A</i>	4.17	22	ANS
220	350	<i>A</i>	4.84	22	ANS
221	350	<i>A</i>	3.12	21.5	Lavoix 3, 57
222	350	<i>A</i>	—	—	Balog p. 125
223	350	<i>Æ</i>	—	—	Balog p. 133
224	351	<i>A</i>	3.88	23	Balog p. 125
225	351	<i>A</i>	3.46	22.5	Lavoix 3, 58
226	351	<i>A</i>	—	—	Balog p. 125 (4 spec)
227	351	<i>Æ</i>	3.28	26	ANS
228	351	<i>Æ</i>	2.16	23	AUB C.8830
229	351	<i>Æ</i>	2.56	24	L-W 36
230	352	<i>Æ</i>	—	—	Balog p. 133
231	353	<i>A</i>	3.55	23	ANS
232	353	<i>A</i>	4.32	23	ANS
233	353	<i>A</i>	4.08	23	Lavoix 3, 59
234	353	<i>A</i>	3.07	22	Lavoix 3, 60
235	353	<i>A</i>	3.88	22.5	Lavoix 3, 61
236	353	<i>A</i>	2.60	24	<i>BMC</i> 2, 237
237	353	<i>A</i>	4.37	23	Naq p. 280
238	353	<i>A</i>	3.33	21	AUB C.8829
239	353	<i>A</i>	—	—	Balog p. 125 (9 spec)
240	353	<i>Æ</i>	3.95	25	ANS
241	353	<i>Æ</i>	1.82	25	ANS
242	353	<i>Æ</i>	3.42	25	ANS
243	354	<i>Æ</i>	2.80	24	Balog p. 134
244	355	<i>A</i>	2.69	21.5	ANS
245	355	<i>A</i>	3.57	23	ANS

<i>No.</i>	<i>Year</i>	<i>Metal</i>	<i>g</i>	<i>mm</i>	<i>Reference</i>
246	355	<i>A</i>	3.41	22	ANS
247	355	<i>A</i>	—	—	Balog p. 125 (3 spec)
248	355	<i>A</i>	1.30	21	AUB C.8761

‘Abbāsīd al-Muṭī’**‘Alid legend**

249	355	<i>A</i>	4.94	24	<i>BMC</i> 2, 239
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Ṭahshīdīd In the names of al-Ḥasan b. ‘Ubayd Allāh and Aḥmad b.**‘Alī; al-Muṭī’****‘Alid legend**

250	357	<i>A</i>	—	—	Balog p. 134
251	358	<i>A</i>	—	—	Balog p. 125 (2 spec)

Ṭahshīdīd In the names of al-Ḥasan b. ‘Ubayd Allāh and Aḥmad b.**‘Alī; al-Muṭī’**

252	358	<i>A</i>	3.52	22	ANS
253	358	<i>A</i>	3.83	23	ANS
254	358	<i>A</i>	—	—	Balog p. 125 (8 spec)

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THE WANDERING DIE OF NĪSĀBŪR: A SEQUEL

(PLATE 22)

NICHOLAS M. LOWICK

Some years ago this journal carried a note on a gold dinar of an extraordinary hybrid type, struck from an obverse die of the Sāmānid amir Nūḥ II inscribed with the mint name Nīsābūr (i.e. Nīshāpūr) and the date 375 H., and from a reverse die of the Kākwayhid Muḥammad b. Dushmanzār attributable to the mint of Iṣbahān, ca. 432 H. (Plate 22, 1).¹ It was suggested that the coin, which is plainly not a modern counterfeit, was the product of an accidental pairing of dies at the Iṣbahān mint in the period following the struggle between Muḥammad b. Dushmanzār and Mas'ūd the Ghaznawid, the latter being presumed to have brought an old die with him from his headquarters in Khurasan. The recent appearance of a second, associated mule justifies a re-examination of the problem, which now presents itself in a different light. The new coin, which like its companion is now in the British Museum collection, has one side struck from the same Sāmānid obverse die; the other side is struck from a Seljuq obverse die of al-Baṣra dated 449 H. (A.D. 1057–58).²

¹ N. M. Lowick, "A Sāmānid/Kākwayhid Mule," in *ANSMN* 14 (1968), pp. 159–62.

² The coin appears in Sotheby's *Catalogue of Islamic Coins*, 29 April 1981, 321, where the problem of the two mules is first discussed.

Obverse 1

٣

لا اله الا
الله وحده
لا شريك له
الملك المنصور

Inner margin: بسم الله ضرب هذا الدينار بنيسابور سنة خمس
و سبعين و ثلثمائة

Outer margin: *Qur'ān* 33:3-4

Obverse 2

٢٦

لا اله الا
الله وحده
لا شريك له
القائم بامر الله

Inner margin: بسم الله ضرب هذا الدينار بالبصرة سنة تسع
و اربعين و اربعمائة

Outer margin: *Qur'ān* 30:3-4

W 4.03 g 25 mm BM 1981.5.1.4

(Plate 22, 2)

Obverse 1, the Sāmānid side, is in some respects better preserved than the corresponding side of the Sāmānid/Kākwayhid piece. The die itself, however, was decidedly more worn when used to strike the second coin. The field shows minor flaws and raised striations, presumably caused by cracks in the die. One of these is particularly noticeable: it runs horizontally from the lower part of the isolated letter *kāf* in the upper area to the top of the *lām* in *ilāha*. There is no sign of this flaw on the first coin. It is thus clear that the new coin was struck later, when the die had already served to strike other—perhaps hundreds of other—pieces.

Obverse 2, the Seljuq side, is identical with—although not from the same die as—the obverse of a dinar of Ṭughril Beg (Plate 22, 3) in the

British Museum (*BMCOr* 3, 59). It shows, in addition to the mint name al-Baṣra and the date 449, the name of the 'Abbāsīd Caliph al-Qā'im, the Seljuq bow-and-arrow (bow-and-mace?) emblem and an isolated *jīm*, *khā* or *hā* above the word *ilāha*. There can be no question but that this side of the coin, like the Sāmānid side, was struck from a genuine medieval die.

It follows that the new mule must have been struck in or after 449/1057–58, that is not less than 74 Hijra years after the date of manufacture of the Sāmānid die, and 17 years after that of the reverse die used to strike the Sāmānid/Kākwayhid mule. The geographical discrepancy, also, is greater in the case of the new mule. From Nīsābūr in northeastern Iran to Baṣra in lower Iraq is a distance of some 900 miles as measured on the map, or 1,100 in terms of the distance that must have been covered by the medieval traveller. This compares with about 600 (practically speaking about 800) miles between Nīsābūr and Iṣbahān, which lie on opposite sides of the Dasht-e Kavīr or great Iranian desert. Two questions thus call for an answer. How could a medieval die survive in use for almost three-quarters of a century? And what circumstances could have brought about the linkage of three dies whose mints of origin lie so far apart?

Several lines of approach suggest themselves. The first takes as its point of departure the conclusions reached concerning the Sāmānid/Kākwayhid mule. Assuming this piece to have been struck in Iṣbahān in 432 or shortly after, the Sāmānid obverse die could be envisaged as continuing to travel west and south until it reached Baṣra, where it was again accidentally paired with a local die, this time one of the Seljuq Tughril Beg. The journey between Iṣbahān and Baṣra, as between Iṣbahān and Nīsābūr, was doubtless undertaken by many persons in those times, all three cities being large commercial centers. The die could be seen, too, as moving with the tide of Seljuq conquest, which began in 429 and culminated with Tughril's entry into Baghdad in 447 H. Nevertheless, any theory involving the accidental misuse of a single die by official moneyers at different mints on successive, unrelated occasions, must appear too farfetched to be tenable as an explanation. Even if a reason could be found for the die's having travelled from Jibāl province to Iraq, the chances against its being mistakenly used a second time are enormous. Had it first been employed at Iṣ-

bahān, as suggested in my note on the Sāmānid/Kākwayhid mule, the die would certainly have been destroyed once the moneyer responsible realised his blunder. In short the discovery of the second mule, with its later Seljuq obverse, invalidates the hypothesis devised to account for the first mule, and makes it necessary to look for a different solution. Where two such exceptional hybrids are linked by an obverse die, it will obviously be desirable to explain their genesis by the same set of circumstances—to assign them, in fact, a common origin both in place and in time.

While all three dies used in the striking of the two pieces are patently genuine, it is by no means sure that the coins themselves were produced under official auspices. State interests clearly required that dies should be systematically destroyed, or re-engraved, once their legitimate period of use had expired. In the case of an obverse die, showing the date of striking, this would normally mean at the end of the year. A reverse die, showing the name of the ruler or Caliph, might remain in use for longer, but it too must normally have been destroyed at the end of the reign. Despite this, a few medieval Islamic dies have survived to the present day in usable condition³—evidence that dies were either put into storage (and subsequently lost or abandoned) or purloined from the mint, presumably with the object of striking counterfeit money. The chances of theft or accidental loss were of course augmented by the invasions and revolutions so frequent in Middle Eastern history.

If superannuated dies were stored away, it may well have been government policy that they should be returned to a central repository, whence they could be distributed for re-use once they had been provided with a new striking surface. That this may have been so under the 'Abbāsid Caliphs is suggested by the existence of dirhams struck from obverse dies the mint name of which has been altered—the original mint being still partly legible beneath the new one.⁴ It is doubtful if any such

³ For a listing of extant Islamic dies see J. L. Bacharach and H. A. Awad, "The Problem of Obverse and Reverse in Islamic Numismatics," *NC* 1973, pp. 183–91. Not included in the list is the well-preserved pair of Būyid bronze dies (Majd al-Dawla, al-Muḥammadiyya 393 H.) auctioned at Bonham's *Sale of Ancient, Mediaeval and Modern Coins*, 21–22 May 1980, 794 (illus.).

⁴ L. Ilisch, "Ein Dirhamfund des frühen 10. Jahrhunderts aus der Gegend von Diyarbakir," *Münstersche Numismatische Zeitung*, 9 Jahrgang (1979), Heft 1,

centralisation was practiced by the Seljuqs, under whom coins of different mints differ markedly from each other in type and style. It should be borne in mind, however, that the three mints with which we are here concerned—Nisābūr, Işbahān, and al-Baṣra—all belonged to the domain of ʿUğhril Beg by the time the latest of the three dies was executed. Thus if the Seljuq government *did* maintain a central repository for dies, it could well have housed the three in question. Supposing such a storehouse to have been located at Baghdad, any major disturbance such as the revolt of al-Basāsīrī in 450–51 H., could have brought about the theft or dispersal of coin dies. It is even conceivable that al-Basāsīrī himself, after profiting from ʿUğhril's absence to assume control of the city, initially minted coins from dies that were not his own, although he is also known to have had coins specially struck in the name of the Fāṭimid Caliph.⁵

Alternatively, and perhaps more plausibly, all three dies may in the first instance have been stored at their mint of production. Were this the case an itinerant moneyer or other state employee with access to mint equipment may have embezzled a number of dies and either used them himself to strike dinars of less than the required fineness, or sold them to an outsider, presumably a jeweller or metalworker with access to gold bullion and the ability to convert it into planchets of an appropriate size and weight from which counterfeits could then be struck. It is established from the existence of signed dirhams that master die cutters (accomplished artists who were probably at all times in short supply) on occasion worked for more than one mint.⁶ They may not have been the only mint workers to travel, carrying their equipment with them from one workshop to the next. Mints represented by the

pp. 7–14, nos. 42–46, 53, 111–15, 150. A number of other examples, of the same period or slightly later, were located among the British Museum's 'Abbāsīd coins. It is of course possible that the re-engraved dies which served to strike such coins were transferred directly from one mint to another without passing through a central holding office.

⁵ *El*², s.v. "al-Basāsīrī" (M. Canard), pp. 1073–75; and E. Zambaur, *Die Münzprägungen des Islams* (1968), pp. 231 and 234, n. 59.

⁶ Carol M. Bier, "The Work of al-Ḥasan b. Muḥammad, Die Engraver at Işbahān and al-Muḥammadiyya," *ANSMN* 24 (1979), pp. 243–56.

signatures *ʿaskar*, *al-muʿaskar*, *urdā*, etc., were themselves evidently mobile, travelling with the army of the ruler and supplying its needs. A moneyer from, say, the mint of Nīsābūr may have been ordered to accompany the conquering army of Ṭughril Beg into the western provinces and thus have had the opportunity to equip himself with dies from mints situated many miles apart.

Adopting a more sceptical stance, it would be possible to view both mules as modern counterfeits struck from medieval dies. This might occur if a forger were to obtain, by a lucky chance, three dies of similar appearance in sufficiently good condition for him to produce what would, at a cursory glance, pass as genuine dinars. As there are so few extant medieval Islamic dies, such a forger must presumably have had access to some such store or cache as that postulated above. In that case, the same problem would remain to be answered: was there a central storehouse for dies, or how were they assembled? If the mules are modern fakes, moreover, it is surprising that not more of them have appeared on the collectors' market.

With a view to establishing whether the two pieces were struck from the same consignment of bullion, and if so whether they represent an official issue, specific gravity tests were carried out on the mules themselves and on two related coins of normal type—a Kākwayhid dinar of Muḥammad b. Dushmanzār, Iṣbahān 432 H. (*BMCOr* 9, p. 270, 42^{aa}) and a Seljuq dinar of Ṭughril Beg, al-Baṣra 449 H (*BMCOr* 3, 59). The results are set out below, the estimate of gold content being valid so long as no significant amount of copper is present in the alloy.

<i>Coin</i>	<i>SG</i>	<i>Gold Content</i>
Sāmānid/Kākwayhid mule	15.78	ca. 73%
Sāmānid/Seljuq mule	16.58	ca. 80%
Kākwayhid dinar	17.20	ca. 85%
Seljuq dinar	18.80	ca. 96.5%

From the wide discrepancy in fineness between the two mules, it is clear that they were not struck from the same batch of gold—although they could have been struck from successive batches of a different fineness. The standard of purity of Kākwayhid and Seljuq dinars is unknown, for few have yet been analyzed. It may well be that the standard

varied from mint to mint and from issue to issue at the same mint.⁷ Judging simply by the fineness of the two ordinary dinars analyzed, both mules fall somewhat short of the requisite purity. This could be a reason for regarding them as counterfeits, although in that case it would be curious that their fineness were not lower still. For the time being the problem of where and how these two strange hybrids came to be made must regrettably be regarded as unsolved.

⁷ Seljuq dinars of Balkh in the reigns of Berkyāruq and Muḥammad, for instance, were very much more base than contemporary dinars of the western provinces. See N. M. Lowick, "Seljuq Coins," *NC* 1970, pp. 244–46.

A SIMPLIFIED METHOD FOR CALCULATING THE ORIGINAL NUMBER OF DIES FROM DIE LINK STATISTICS

GILES F. CARTER

Calculation of the original number of dies for issues of ancient coins is important in estimating the approximate number of coins struck, the probable lifetime of dies, number of anvils (work-stations), and the number of die combinations. Several methods have been proposed to calculate the original number of dies from die link statistics: Brown,¹ Good,² Guilbaud,³ Lyon,⁴ Carter and Moore,⁵ Carter,⁶ Mora Mas,⁷ Mül-

¹ I. D. Brown, "Some Notes on the Coinage of Elizabeth I with Special Reference to Her Hammered Silver," *BNJ* 28 (1955-57), pp. 568-603; "On the Use of Statistics in Numismatics," *NCirc* 77 (1969), pp. 83-84; "Statistical Methods as a Tool in Numismatics," *Cornucopiae* 3 (1975), pp. 33-44.

² I. J. Good, "The Population Frequencies of Species and the Estimation of Population Parameters," *Biometrika* 40 (1953), pp. 237-64.

³ G. T. Guilbaud, "A propos de l'estimation du nombre des coins," *BSFN* 29 (1974), pp. 625-34.

⁴ C. S. S. Lyon, "The Estimation of the Number of Dies Employed in a Coinage," *NCirc* 73 (1965), pp. 180-81; "Consultation in Research," *BNJ* 35 (1966), pp. 223-33.

⁵ G. F. Carter and J. W. Moore, "Calculation of the Approximate Number of Dies and Die-Combinations of Ancient Coins from Die-Link Statistics," *SCMB* 1980, pp. 172-77, 212-14, 241-46.

⁶ G. F. Carter, "A Graphical Method for Calculating the Approximate Total Number of Dies from Die-Link Statistics of Ancient Coins," in *Scientific Studies in*

ler,⁸ Carcassonne,⁹ McGovern,¹⁰ and Brunetti.¹¹ Most of these methods assume that all dies produced the same number of coins each; however, this assumption is known to be false. Three methods assume variable die lifetime¹² and are preferable because it is well known that die lifetime varied considerably.

Lyon¹³ developed one of the early methods for calculating the total number of dies, and Carter extended this method to include variable die lifetime by using a computer to simulate die link statistics using random numbers. In this computer program, written by J. W. Moore,¹⁴ random numbers are used to represent dies and coins: the *range* of random numbers represents the total number of original dies; the *number* of random numbers represents the number of coins in the study. Groups of different sizes of random numbers are established to represent variable die lifetimes. This enables one to choose any desired distribution of lifetimes of dies. Previously Carter chose an empirical die lifetime distribution that provided results in agreement with die link data obtained from Crepusius denarii.¹⁵ These denarii, struck in 82 B.C., have each reverse die uniquely identified by a Roman numeral from 1 to

Numismatics, ed. W. A. Oddy, British Museum Occasional Paper 18 (1980), pp. 17–29, where the “Lyon-Carter” method is developed; “Die-Link Statistics for Crepusius Denarii and Calculations of the Total Number of Dies,” *Table Ronde Numismatique et Statistique*, 17–19 Sept. 1979, Paris.

⁷ F. Mora Mas, “Estimation du nombre de coins selon les répétitions dans une trouvaille de monnaies,” *Table Ronde Numismatique et Statistique*, 17–19 Sept. 1979, Paris.

⁸ J. W. Müller, “Estimation du nombre originel de coins,” *Table Ronde Numismatique et Statistique*, 17–19 Sept. 1979, Paris.

⁹ C. Carcassonne, “Tables pour l’estimation par la méthode du maximum de vraisemblance du nombre de coins de droit (ou de revers) ayant servi à frapper une émission,” *Table Ronde Numismatique et Statistique*, 17–19 Sept. 1979, Paris.

¹⁰ W. E. McGovern, “Missing Die Probabilities, Expected Die Production and the Index Figure,” *ANSMN* 25 (1980), pp. 209–23.

¹¹ L. Brunetti, “Über eine Formel zur Berechnung der ungefähren Stempel-Schlagzahl,” *JNG* 15 (1965), pp. 65–74.

¹² Above, nn. 5, 6, and 8.

¹³ Above, n. 4.

¹⁴ Above, n. 5.

¹⁵ Above, n. 6, “Graphical Method.”

519. Each obverse die is uniquely identified by the combination of a letter of the Roman alphabet and a group symbol. Although Buttrey¹⁶ and Carter (unpublished) have found some mistakes by the mint officials in the numbering and lettering of Crepusius dies, it is believed that the total number of reverse dies is about 510, and the approximate number of observe dies is 479. Therefore the Crepusius issue is a good one to check methods for calculating original numbers of dies from die link statistics.

The present work involves the use of an improved, mathematically defined distribution for die lifetimes, and develops a simple equation for calculating the original number of dies. This equation should make the method easy for numismatists to use.

DISTRIBUTION OF DIE LIFETIMES

Numerous observations lead to the conclusion that ancient die lifetimes varied by a large factor within a given issue. In almost any issue of ancient coins some dies are very common, whereas a few dies are not likely to be represented even in large samples of coins. A large number of coins produced from a long-lived die usually results in a dozen or more specimens surviving to modern times. However, a die with a short lifetime would have produced relatively few coins (probably fewer than 3000 if the average die produced about 15,000 coins), and consequently zero to one, two, or at most three coins might presently exist in all the world's collections.

In calculating the original number of dies Carter at first used a die lifetime having a Gaussian distribution (bell-shaped curve).¹⁷ However, this distribution underestimated the number of long-lived dies because of the shape of the curve. In the present study the distribution is a gamma distribution with $\alpha = 2$ and $\beta = 25$: $y = \frac{x e^{-x/25}}{25^2}$, where

¹⁶ T. V. Buttrey, "The Denarii of P. Crepusius and Roman Republican Mint Organization," *ANSMN* 21 (1976), pp. 67-108.

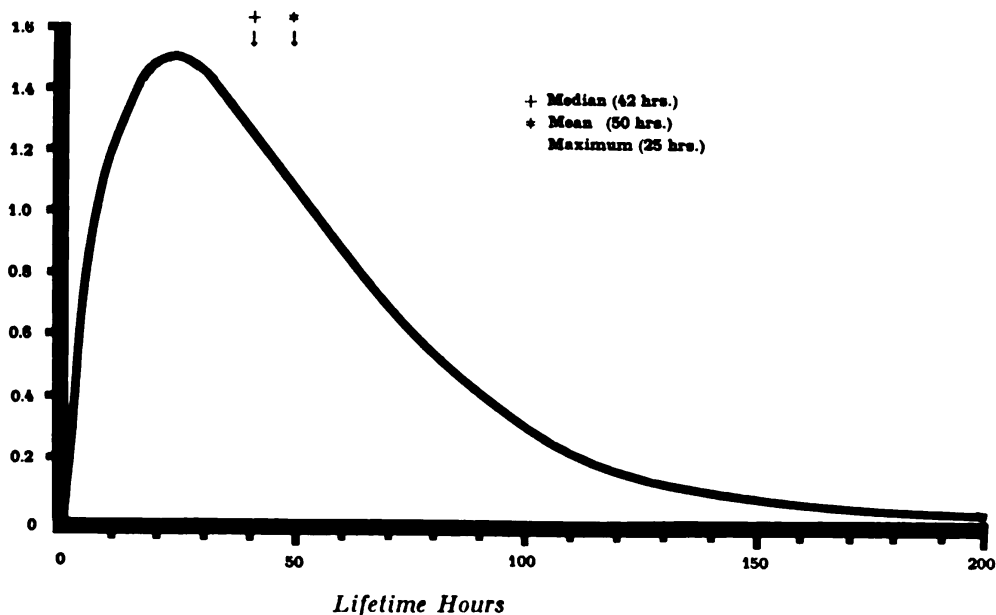
¹⁷ Above, n. 5.

y is the fraction of dies and x is the die lifetime in hours.¹⁸ This distribution (Fig. 1, compare with a bell-shaped curve) describes a number of natural phenomena such as the length of life of industrial equipment and the molecular speeds of gas molecules at a given temperature. When dies failed due to cracking, their lifetimes would best be represented by a gamma distribution. The above equation gives the best fit obtained for die link statistics of *Crepusius denarii*. However, it probably is not applicable to all series of ancient coins.

FIG. 1

Gamma Distribution of Die Lifetimes

Percentage of Dies



¹⁸ P. G. Hoel, *Introduction to Mathematical Statistics*, 4th ed. (New York, 1971), pp. 86–90.

SIMPLE EQUATION FOR CALCULATING THE ORIGINAL NUMBER OF DIES

C. S. S. Lyon's equation for calculating the original number of dies assuming equal coin productivity from all dies is $\frac{d}{n} = \frac{(1 - e^{-n/D})}{n/D}$.¹⁹ Lyon

tabulated d/n as a function of n/D where n is the number of coins in the study, d is the number of known (different) dies in the study, and D is the calculated, approximate number of original dies. Because of the exponential nature of this equation, the curve of d/n values decreases non-linearly with increasing n/D values. In spite of several attempts, the writer was unable to derive an equation for the "Lyon-Carter" method that is based on variable lifetimes of dies.

When n/D is plotted as a function of n/d , the curve is nearly linear. In fact, it asymptotically approaches the straight line which would occur if $n/D = n/d$ (note that for very large numbers of coins in a given issue, $D = d$, or all dies are known). Fig. 2 shows n/D plotted as a function of n/d using points obtained from the computer: ten computer calculations were averaged to obtain each point on the graph. Note that the curve is very nearly a straight line, particularly when n is greater than $2d$. The dashed curve in Fig. 2 is a plot of the equation used by Lyon (see above) which assumes equal productivity of coins from all dies. Note that this curve reaches the asymptote much sooner than the curve assuming a gamma distribution for die lifetimes.

When the above distribution was used, it slightly changed the calculated numbers of original dies compared with Carter's previous results. In the above equation the constant, $\beta = 25$, was chosen so that the average lifetime of dies equals 50 hours, which is believed to be close to the average lifetime of *Crepusius obverse* dies. Using the gamma distribution, Table 1 indicates the projected distribution of die life-

¹⁹ Above, n. 4.

times by percent. For instance 6.2% of the dies would usually have failed within the first 10 hours of use, assuming an average lifetime of 50 hours per die. Also 0.3% of the dies should have had a lifetime greater than 200 hours.

Table 1. Distribution of Die Lifetimes by Percent

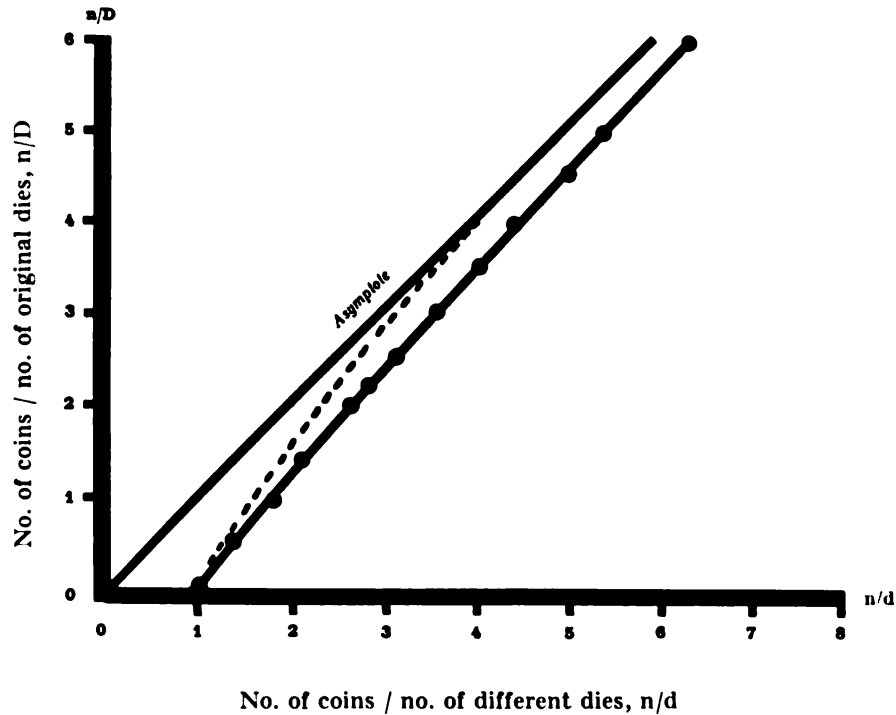
<i>Lifetime Range, Hrs.</i>	<i>Percentage of Dies</i>	<i>Cumulative % of Dies*</i>	<i>Lifetime Range, Hrs.</i>	<i>Percentage of Dies</i>	<i>Cumulative % of Dies</i>
0-5	1.8	1.8	105-10	1.2	93.4
5-10	4.4	6.2	110-15	1.0	94.4
10-15	6.0	12.2	115-20	0.9	95.2
15-20	6.9	19.1	120-25	0.7	96.0
20-25	7.3	26.4	125-30	0.6	96.6
25-30	7.3	33.7	130-35	0.5	97.1
30-35	7.1	40.8	135-40	0.4	97.6
35-40	6.7	47.5	140-45	0.4	97.9
40-45	6.2	53.7	145-50	0.3	98.3
45-50	5.7	59.4	150-55	0.3	98.5
50-55	5.1	64.5	155-60	0.2	98.8
55-60	4.6	69.2	160-65	0.2	99.0
60-65	4.1	73.3	165-70	0.2	99.1
65-70	3.6	76.9	170-75	0.1	99.3
70-75	3.2	80.1	175-80	0.1	99.4
75-80	2.8	82.9	180-85	0.1	99.5
80-85	2.4	85.3	185-90	0.08	99.6
85-90	2.1	87.4	190-95	0.07	99.6
90-95	1.8	89.3	195-200	0.06	99.7
95-100	1.6	90.8	200-2000	0.30	100.0
100-105	1.4	92.2			

* "Cumulative percentage of dies" means that 1.8% of all dies had a lifetime of 5 hours or less, 6.2% of all dies had a lifetime of 10 hours or less, etc. All numbers in the above table were calculated and then rounded off; slight discrepancies are due to rounding. The percentages were calculated by determining the appropriate area underneath the curve in Fig. 1 by using calculus.

Average, or mean, lifetime = 50.0 hours; median lifetime = 42.0 hours (half of the dies lasted less than 42.0 hours); maximum number of dies occur at a lifetime of 25 hours.

FIG. 2

n/D Plotted as a Function of n/d Obtained from Computer Simulation*



* The dashed curve is a plot of the equation used by Lyon which assumes equal coin productivity from all dies. The lower curve is the plot obtained from the computer simulation.

Because the line of n/D versus n/d obtained from computer simulation is only slightly curved, it can be closely approximated by three straight lines. Although the equation for the curve is not known²⁰ the equations for the three straight lines may be easily determined from linear regression ("least squares"). The three equations for calculating D , the original number of dies, are as follows.

²⁰ This equation is relatively unimportant because it would be much more difficult to use than one of the three following equations.

- | | | |
|-----|-------------------------------------|-------------------------------------|
| | $\frac{n \cdot d}{1.214n - 1.197d}$ | |
| (1) | D | used in the range $n < 2d$; |
| | $\frac{n \cdot d}{1.124n - 1.016d}$ | |
| (2) | D = | used in the range $n = 2$ to $3d$; |
| | $\frac{n \cdot d}{1.069n - 0.843d}$ | |
| (3) | D = | used in the range $n > 3d$; |

where d = number of known (different) dies, n = number of coins in the study.

Previously when one used the Lyon or Lyon-Carter method it was necessary to use a table of d/n values listed as a function of n/D values. Interpolation was necessary plus a final calculation, dividing n by n/D to obtain D . It is much simpler to use one of the above equations. If several or many calculations for D need to be made, it is convenient to use a programmable calculator.

Tables 2 and 3 illustrate the use of the above equations to calculate D using data obtained for *Crepusius denarii*. Excellent agreement was obtained with estimates made by Buttrey:²¹ 479 obverse dies (Buttrey) versus 475 ± 10 calculated from equations 1, 2, and 3. There are approximately 519 reverse dies (the exact number is unknown due to errors of omission and duplication of die numbers), whereas the calculated number of obverse dies is 494 ± 10 . Also listed in the tables are standard deviations for the calculated number of dies using Carter's empirical equation, $s = \frac{D\sqrt{D}}{\sqrt{n-1}}$, where s is the standard deviation, D is the

calculated total number of dies, and n is the number of coins in the study.²² In all cases there is at most a very small difference between the number of dies calculated using the equation and the number found from a table of d/n versus n/D values. The standard deviation is always at least ten times this difference meaning that the equations give results that are almost identical to the table values, and these results are just as good as the ones obtained from the table.

²¹ Above, n. 16.

²² Unpublished, mentioned in "Graphical Method" (above, n. 6), p. 20.

Table 2. Calculation of Numbers of Obverse of Crepusius Denarii^a

<i>Group Number</i>	<i>Symbol</i>	<i>No. of Coins, n</i>	<i>No. of Known Dies, d</i>	<i>Calculated No. of Dies, D ± S^b</i>	<i>Probable No. of Dies</i>
1	None	62	20	24.9 ± 2.0	22
2	Thunderbolt	61	20	25.0 ± 2.1	22
3	Feather	40	14	17.9 ± 1.9	21
4	Wheat	53	17	21.1 ± 1.9	22
5	Grasshopper	51	16	19.7 ± 1.8	21
6	Grapes	48	19	25.7 ± 2.8	21
7	Ivy Leaf	61	19	23.4 ± 1.9	21
8	Flower	49	16	20.0 ± 1.9	21
9	Thyrsus	25	5	5.5 ± 0.5	7
10	Bird	63	17	20.0 ± 1.4	21
11	Poppy	61	20	25.0 ± 2.1	24
12	Lizard	53	20	26.4 ± 2.6	21
13	Crescent	50	17	21.5 ± 2.0	21
14	Bidens	24	12	18.6 ± 3.5	21
15	Ear	59	17	20.4 ± 1.6	21
16	Star	49	17	21.6 ± 2.1	21
17	Branch	33	14	19.6 ± 2.7	21
18	Hooked Staff	31	11	14.1 ± 1.8	15
19	Cornucopiae	50	20	27.2 ± 2.9	21
20	Altar	16	5	6.2 ± 1.0	7
21	Turtle	32	14	20.0 ± 2.9	21
22	Wing	40	16	21.7 ± 2.6	22
23	Shell	25	13	20.8 ± 4.0	21
24	Palm Branch	39	14	18.1 ± 2.0	17
				484	473 ^c
Total		1075	373	475 ± 10	

^a Using the equations presented in this paper.

^b S is the standard deviation calculated from $S = \frac{D\sqrt{D}}{n-1}$.

^c T. V. Buttrey gave 479 as the probable number of obverse dies.

Table 3. Calculation of Numbers of Reverse Dies of Crepusius Denarii^a

<i>Reverse Die Numbers^b</i>	<i>Number of Coins, n</i>	<i>Number of Known Dies, d</i>	<i>Calculated No. of Dies, D ± S^c</i>	<i>Probable No. of Dies</i>
1-25	79	22	26.1 ± 1.7	26
26-50	54	18	22.6 ± 2.0	25
51-75	59	19	23.6 ± 2.0	25
76-100	70	22	27.1 ± 2.0	25
101-125	79	18	20.3 ± 1.2	< 25
126-150	42	18	25.4 ± 3.1	25
151-175	71	20	23.8 ± 1.7	25
176-200	68	19	22.6 ± 1.6	25
201-225	58	19	23.8 ± 2.0	27
226-250	60	19	23.5 ± 1.9	26
251-275	34	15	21.5 ± 3.0	25
276-300	41	16	21.5 ± 2.5	25
301-325	50	20	27.2 ± 2.9	27
326-350	44	19	26.9 ± 3.2	25
351-375	40	17	23.8 ± 3.0	25
376-400	48	20	27.7 ± 3.1	28
401-425	39	19	29.0 ± 4.1	25
426-450	45	18	24.4 ± 2.7	25
451-475	44	19	26.9 ± 3.2	25
476-500	35	15	21.1 ± 2.9	25
501-519	22	12	20.0 ± 4.2	19
			509	< 519
Total	1082	384	494 ± 10	

^a Using the equations presented in this paper.

^b The dies were arbitrarily separated into groups of 25 to enable multiple checks of the calculations.

^c S is the standard deviation calculated from $S = \frac{D\sqrt{D}}{n-1}$.

CONCLUSION

A simple equation (or equations) now enables rapid calculation of the total number of dies for issues of ancient coins made from at least several dies. A gamma distribution was used as the model for the distribution of die lifetimes. The results obtained from using the equations are in excellent agreement with die link data for over 1000 Crepusius denarii. However, it is not known yet whether the calculations give reasonable results for other series of ancient coins. Obviously it is important to test these equations using die link statistics for other series. It is entirely possible that early Greek minting procedures were so different from Roman ones that other equations will apply to Greek series of coins.

A NOTE ON CALCULATOR PROGRAMMING²³

It is possible to linearize the curve of Fig. 2 so that the original number of dies, D , can be calculated from a single expression, regardless of the range of number of coins, n , to the number of observed dies, d , with results equivalent to those obtained from the three linear regression equations. Thus, the need to decide which of the three equations to use is obviated and the calculator has to be programmed only once for all groups of coins studied.

One such single equation is

(4) $D = n/1.3584 (n/d)^{0.9087-1.2801}$, which is easily solved on a hand calculator for values from D of known figures for n and d . An inexpensive hand calculator such as the Texas Instruments TI-55 makes short work of the arithmetic. For this calculator the program is:

²³ Dr. Dexter C. Seymour was one of the ANS's reviewers of Dr. Carter's article. In his enthusiasm for things mathematical, and with Dr. Carter's permission, he developed this note. The two equations below, (4) and (5), were developed generally from the methods of D. S. Davis, *Nomography and Empirical Equations*, 2nd ed. (New York, 1962).

Memory 1: reserved	Program: Sto 1, \div , Rcl 2, =, y^x , Rcl 3, X,
Memory 2: value of "d"	Rcl 4, -, Rcl 5, =, $1/x$, X, Rcl 1, =, 2nd R/S,
Memory 3: 0.9087	2nd Rst.
Memory 4: 1.3584	
Memory 5: 1.2801	

Another equation which can be used with equally good results is (5) $D = n/22.52 \tanh(0.05522 n/d + 0.1477) - 4.421$. The TI-55 program for equation (5) is

Memory 1: reserved	Program: Sto 1, \div , Rcl 2, X, Rcl 3, +, Rcl
Memory 2: value of "d"	4, =, 2nd tanh, X, Rcl 5, -, Rcl 6, =, \div ,
Memory 3: 0.05522	Rcl 1, =, $1/x$, 2nd R/S, 2nd Rst.
Memory 4: 0.1477	
Memory 5: 22.52	
Memory 6: 4.421	

PLATES

Plate 1



Facing Head Coinage of Larissa

Plate 2



Theon Adelphon Octadrachm (A) and Group 1 Decadrachms (1-4)

Plate 3



Group 2 Octadrachms

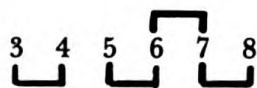


Plate 4



Group 2 Decadrachms (1-4) and Tetradrachms (5-6)

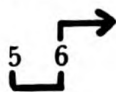


Plate 5



Group 2 Tetradrachms

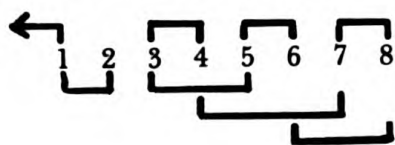


Plate 6



1



2



3



4



5



6



Transitional Octadrachms (1-3) and Decadrachms (4-6)

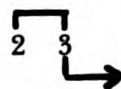


Plate 7



Group 3 Octadrachms (1-4) and Decadrachms (5-7)

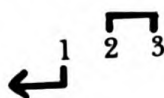


Plate 8



1



2



3



4



5



6



7



Group 4 Octadrachms (1-4) and Decadrachms (5-7)

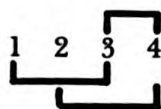


Plate 9



A, 261/0



B, 253/2



C, 253/2



D, 251/0



E, 251/0



F, 246/5



G, 244/3



H, 242/1



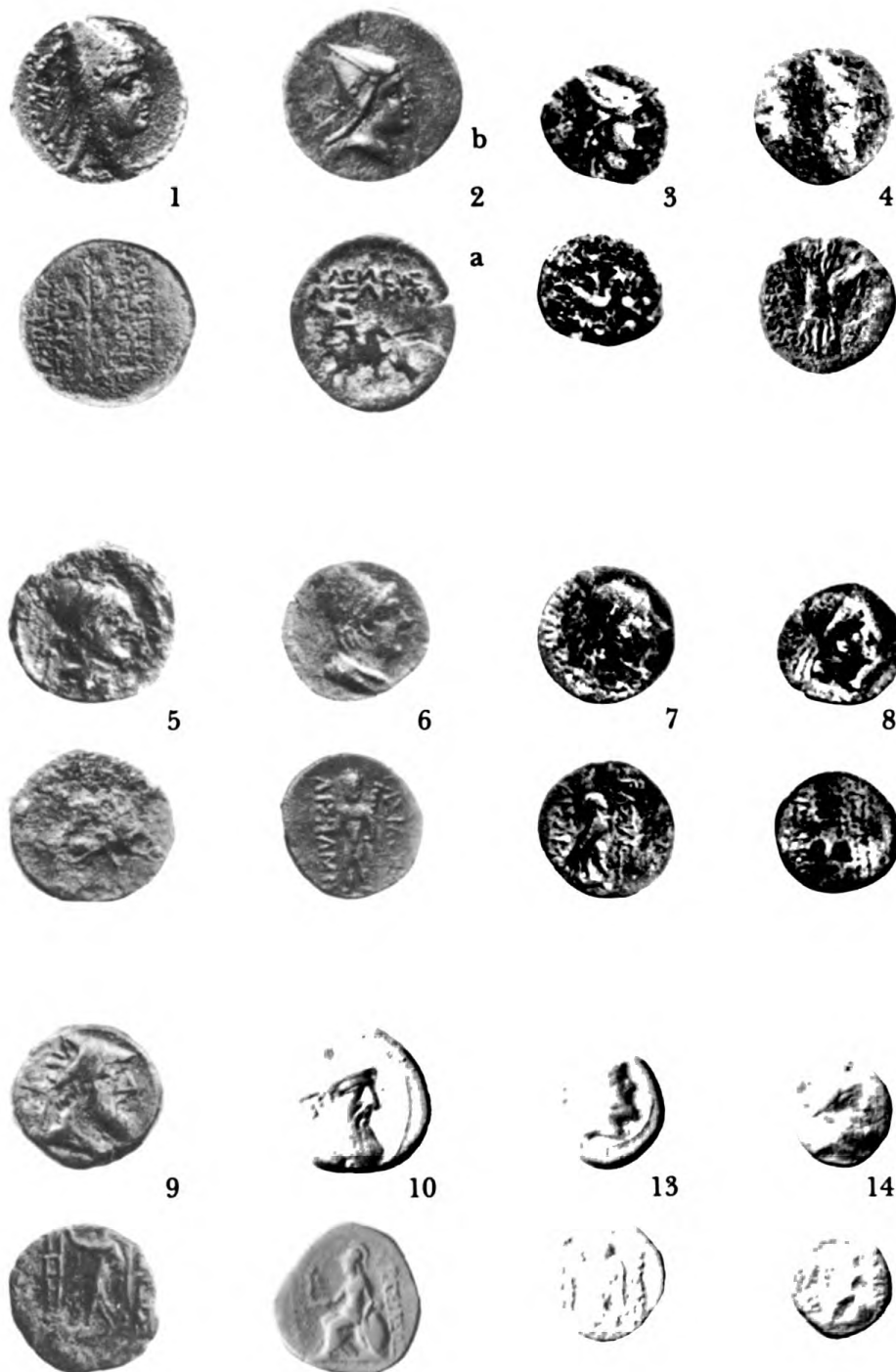
Phoenician and Palestinian Octadrachms

Plate 10



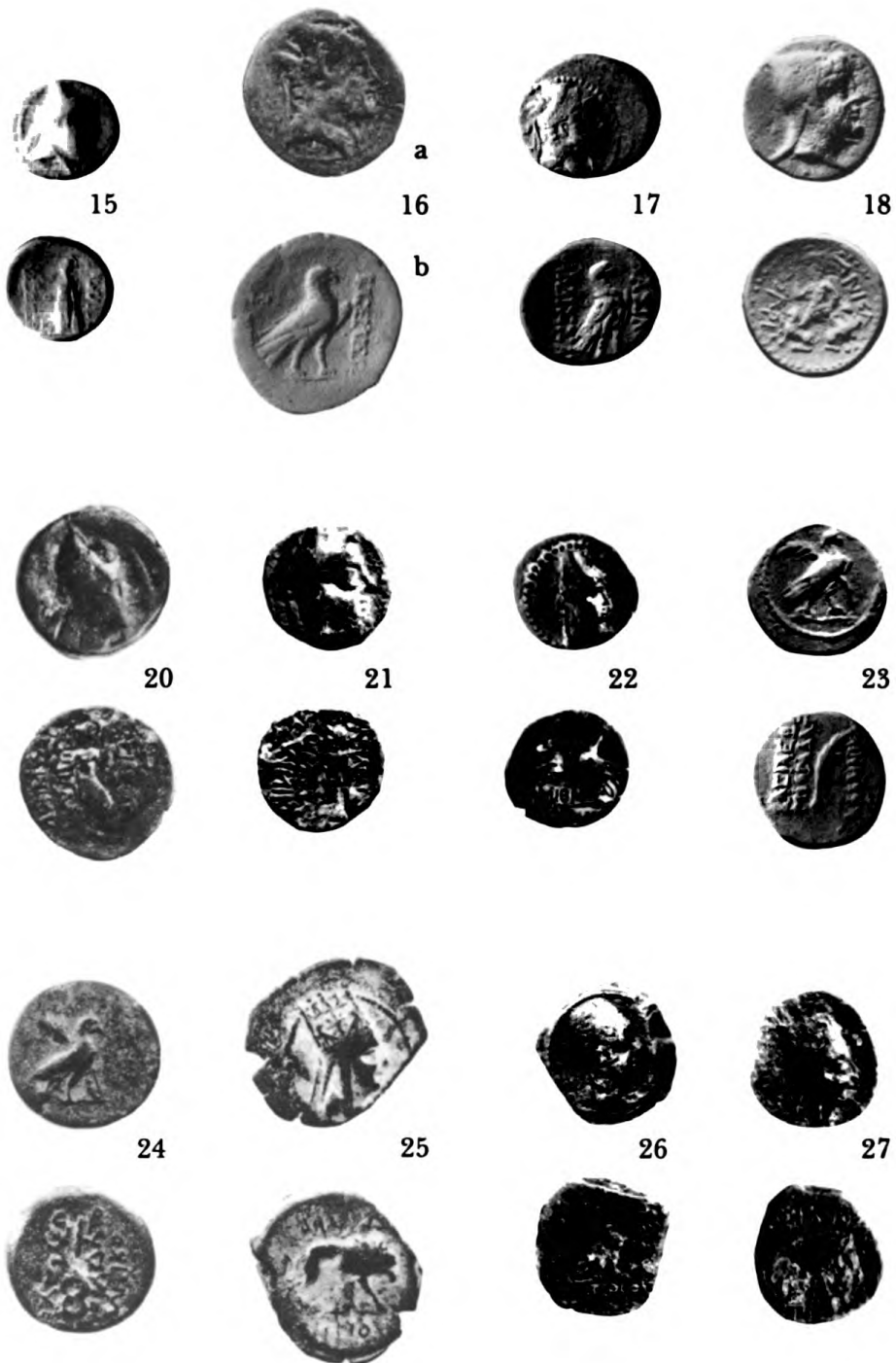
Miscellaneous Arsinoe (A, D, G) and Berenice (B, C, E, F) Strikings

Plate 11



Armenian Kingdoms of Sophene and Commagene

Plate 12



Armenian Kingdoms of Sophene and Commagene

Plate 13



1



2



3



4



5



6



7



Autonomous Tetradrachms of Laodicea ad Mare

Plate 14



8



9



10



11



12



13



14



Autonomous Tetradrachms of Laodicea ad Mare

Plate 15



15



16



17



18



19



20



21



Autonomous Tetradrachms of Laodicea ad Mare

Plate 16



22



23



24



25



26



27



28



Autonomous Tetradrachms of Laodicea ad Mare

Plate 17



Autonomous Tetradrachms of Laodicea ad Mare

Plate 18



36



37



38



39



40



41

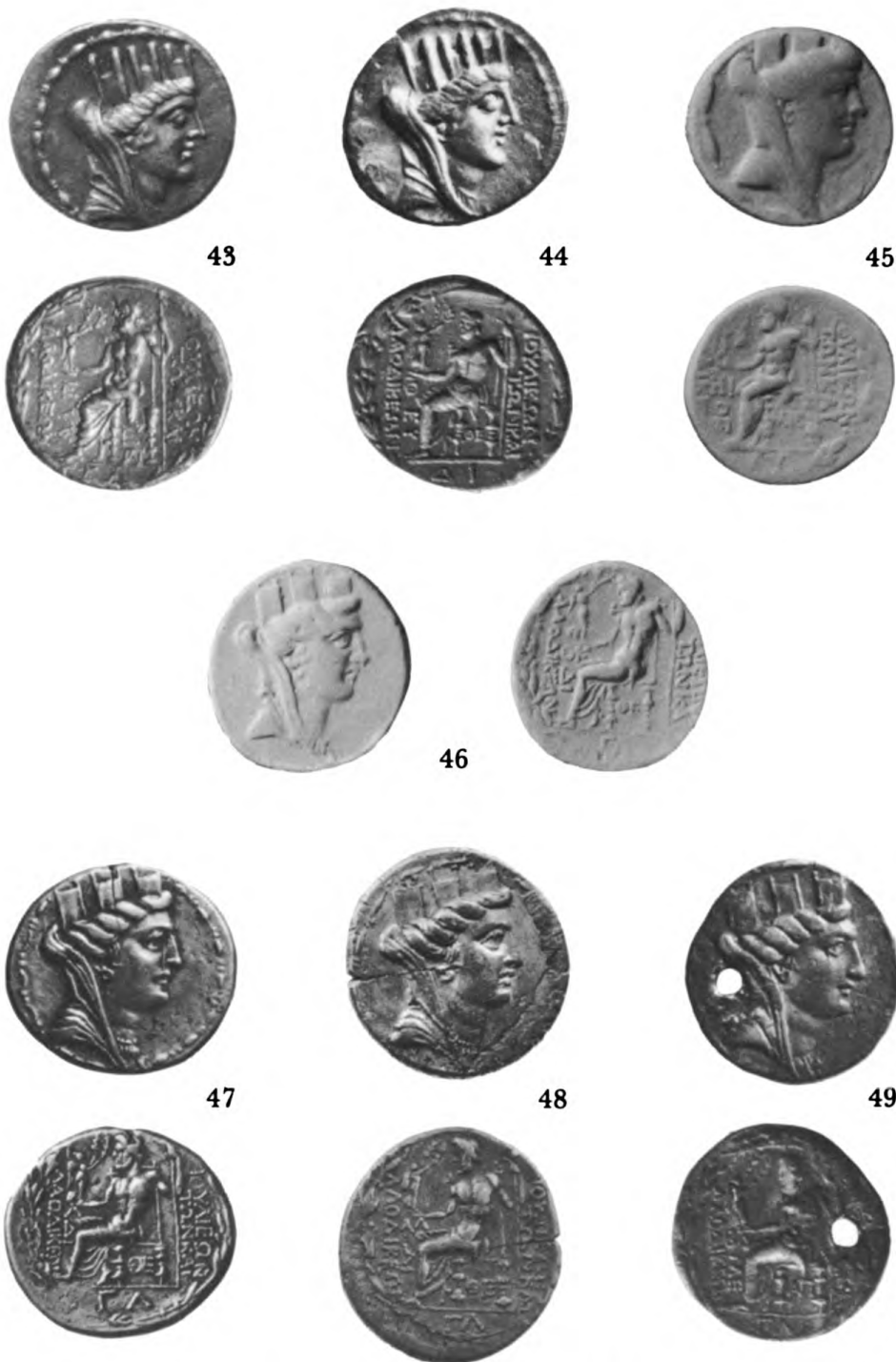


42



Autonomous Tetradrachms of Laodicea ad Mare

Plate 19



Autonomous Tetradrachms of Laodicea ad Mare

Plate 20



1



2



3



4



5



6



7



8



9



Egyptian Tetradrachms under Severus Alexander

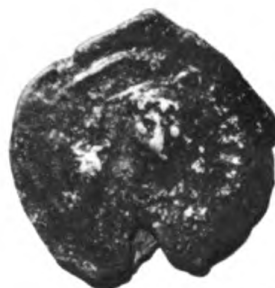
Plate 21



3



16



18



22



30



34



Hoard from Anemurium

Plate 22



1 (2x)



2 (2x)



3 (2x)



Wandering Die of Nisābūr: Sequel

Plate 22



1 (2x)



2 (2x)



Wande

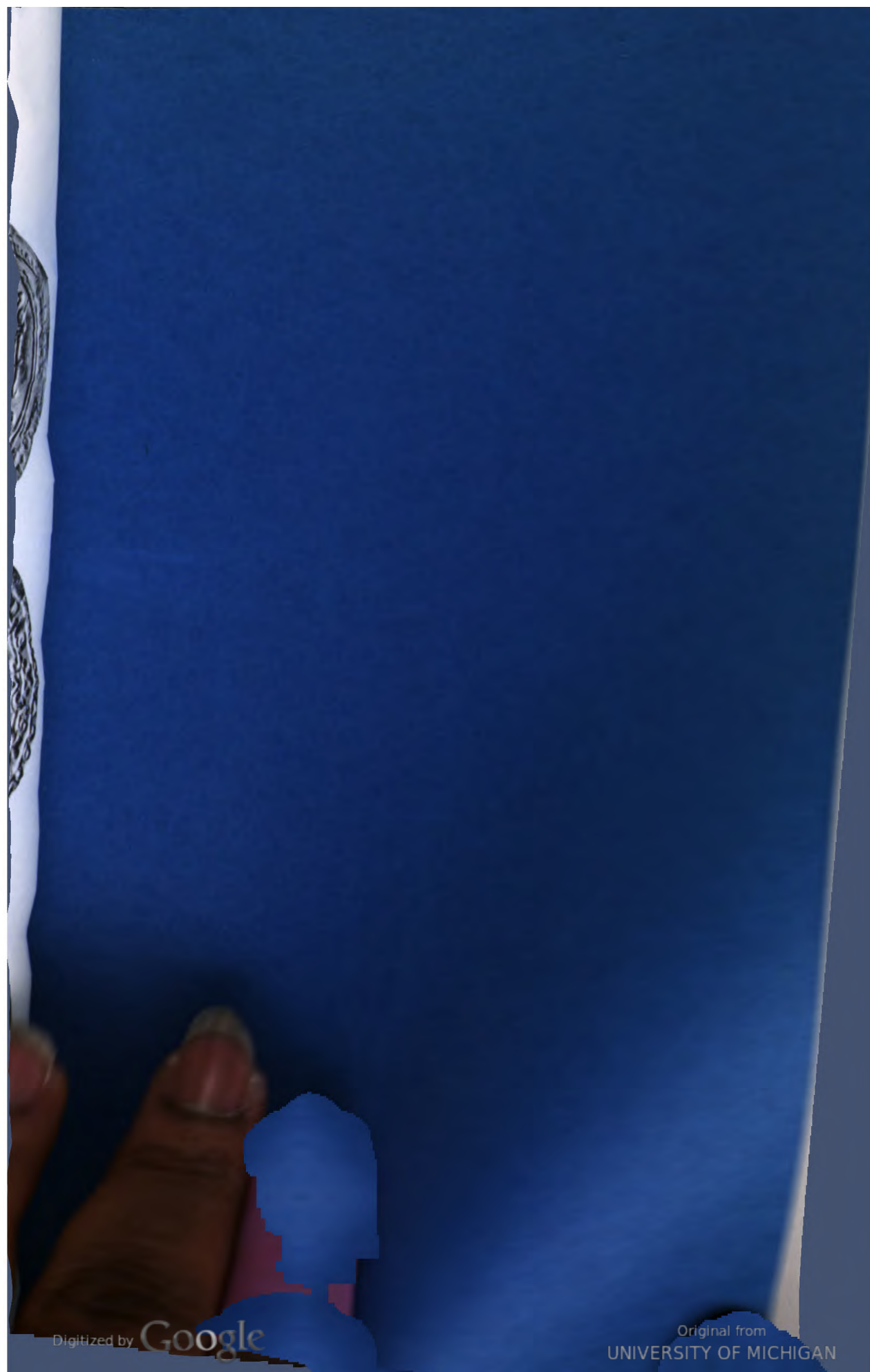


Plate 22



1 (2x)



2 (2x)



3 (2x)



Wandering Die of Nisābūr: Sequel

130



